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The Botanical register

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THE
BOTANICAL REGISTER:

CONSISTING OF

Coloured Figures

OF

EXOTIC PLANTS,

CULTIVATED IN

BRITISH GARDENS;

WITH THEIR

HISTORY AND MODE OF TREATMENT.

THE DESIGNS BY

Sydenham Edwards,

AND OTHERS.

VOL. VII.

——viret semper——nec fronde caducâ
Carpitur.

LONDON:
PRINTED FOR JAMES RIDGWAY, PICCADILLY.
1821.

S. Gosnell, Printer, Little Queen Street, London.

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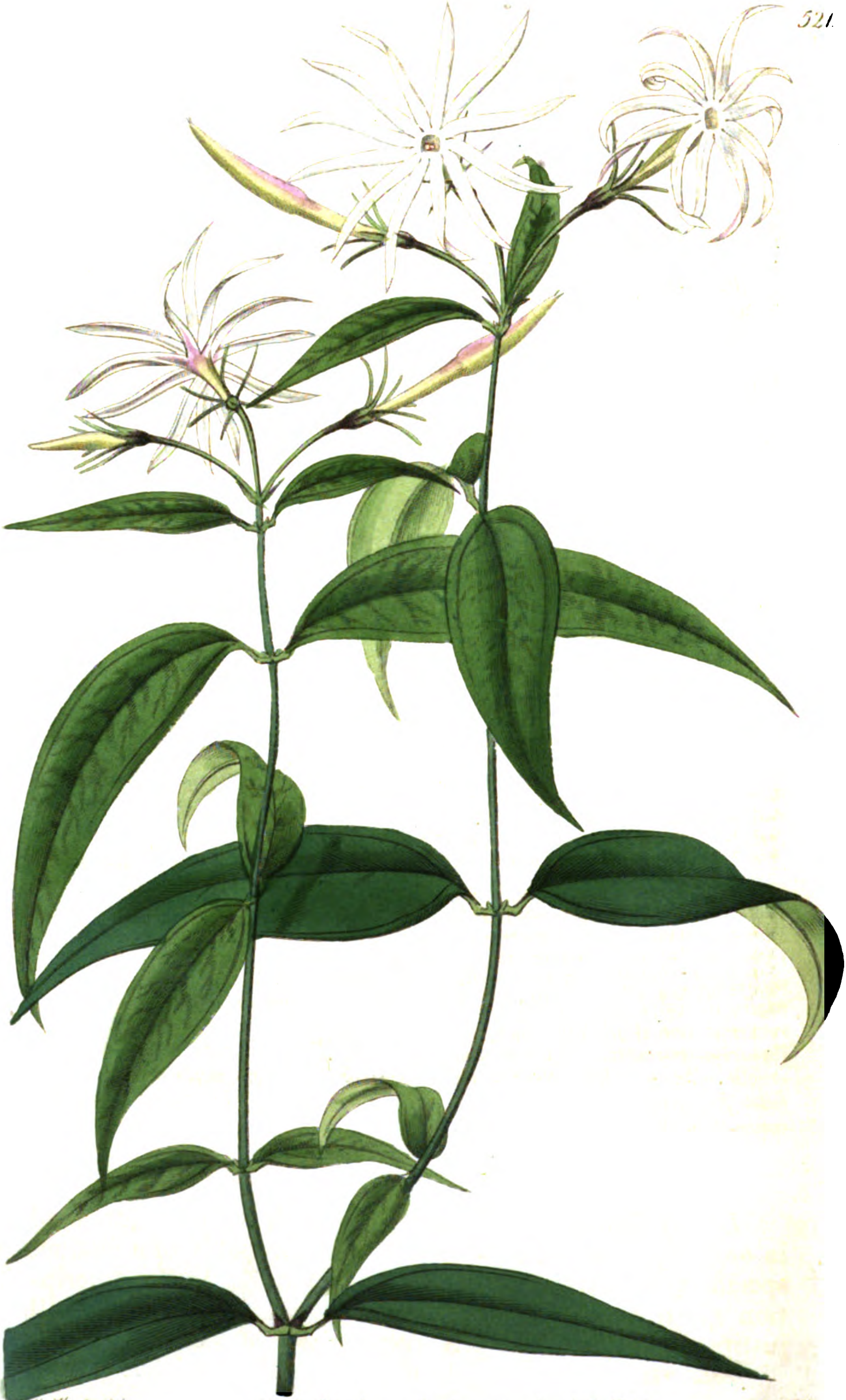

M. Hart. del.   Pub by J. Ridgway 170 Piccadilly March 1. 1821.   J. Watts

JASMINUM angustifolium; β; *laurifolium.*

Alexandrian-laurel-leaved Jasmine.

DIANDRIA *MONOGYNIA.*

Nat. ord. JASMINEÆ. *Jussieu gen.* 104. *Div. II.*
JASMINEÆ. *Brown prod.* 1. 520.
JASMINUM. *Suprà vol.* 1. *fol.* 1.

Div. Foliis simplicibus.

J. *angustifolium*, foliis ovatis mucronatis subtrinerviis, pedunculis terminalibus subternis unifloris. *Vahl enum.* 1. 29.
Jasminum angustifolium. *Willd. sp. pl.* 1. 36.
Jasminum vimineum. *Willd. sp. pl.* 1. 36.
Nyctanthes angustifolia. *Linn. sp. pl. ed.* 2. 1. 8.
Nyctanthes viminea. *Retz. obs. fasc.* 5. 9.
Nyctanthes triflora. *Burm. ind.* 4. *t.* 2?
Katu-pitsjegam-mulla. *Rheede malab.* 6. 93. *t.* 53.

(α) *angustifolium*, fruticosum, volubile, læve: foliis oppositis, petiolatis, ovatis, glabris nitidè et saturatè virentibus; floribus terminalibus 1-2-3; corollæ limbo 8-9-partito; calyce 8-9-fido; baccâ simplici. *Roxb. fl. ind.* 1. 95; *(ex anglico).*

(β) *laurifolium*, scandens, læve; foliis oppositis ovato-lanceolatis lucidis trinervibus; floribus axillaribus terminalibusque, 1-5, elongatè pedunculatis; laciniis calycis 6-7 filiformibus, corollæ 9-12 linearibus longitudine tubi. *Roxb. loc. cit.* 91; *(ex anglico).*

(β) *laurifolium.* Rami *teretes, basi ad divisuras membranâ brevi vaginatis?* Fol. *coriacea, ovato-lanceolata cuspidata, divaricata, nitida, saturatè virentia, 3-nervia nervis* 2 *lateralibus obsoletis, subavenia, 2-4-uncialia latitudine plùs minus unciali:* pet. *subsemiamplexicaulis, brevis crassus canaliculatus, horizontali-patens, articulatus geniculato-ascendens.* Flores *fragrantissimi ochroleuco-albicantes, maximi, sæpiùs trichotomo-trini, pedunculis firmis subuncialibus, lateralibus divaricatis.* Bracteæ *oppositæ, subulatæ, caducæ.* Cal. *viridis, pedunculi subæquicrassi continuus,* $\frac{1}{3}$ *circà brevior tubo corollæ, ad* $\frac{3}{4}$ *partes usque partitus, tubo brevissimo, segmentis senis radiato-divaricatis semitereti-setaceis canaliculatis.* Cor. *nunc extùs purpurâ nimbata;* tubus *erectus striatulus* $\frac{2}{3}$ *ad* $\frac{3}{4}$ *partes unciæ longus;* limbus *stellato-recurvus sub*-11-*partitus diametro sesquiunciali v. majore, laciniis angustis lineari-acuminatis.* Stam. *demersè inclusa;* fil. *medio tubi inserta linearia erecta alba* $\frac{1}{3}$ *circa breviora* antheris *lineari-oblongis mucronatis,* polline *fulvo-flavescente.* Germ. *breve conicum bicolle:* stylus *brevis:* stig. *clavato-continuum oblongum bilobum.*

Laurifolium of Dr. Roxburgh, which we have included in *angustifolium,* as a variety, is most probably of a distinct specific type, although we can find no mark, in the description given by the above botanist, that in our view will justify the separation. A comparison of samples of the

two plants might have furnished the means of satisfactory discrimination; but we have not yet met with any certain one of *angustifolium;* though the plant is said to be in our gardens, and very common in India, where it is found in every forest on the Coast of Coromandel.

In Mr. Lambert's Herbarium, there is a closely allied species found at Sembu, in Nepaul, by Dr. Buchanan, and inscribed *dichotomum;* but which may be at once distinguished from the present species by segments of the calyx, which are subulate and shorter than the tubular portion.

(β) *laurifolium* is a twining shrub with a simple bright-green shining leaf, and a large exquisitely fragrant flower, diffusing a perfume which in some degree reminds us of frankincense. It is found in the mountainous country to the East of Bengal, and has been very lately introduced, having flowered in October last, for the first time, in the hothouse of the nursery of Messrs. Colvill, in the King's Road, Chelsea.

The following description is by Dr. Roxburgh:

" *Leaves* opposite, subsessile, ovate-lanceolate, firm and " glossy; margins entire, somewhat thick; faintly 3-nerved; " from two to four inches long, and from one to two " broad. *Peduncles* terminal and axillary, sometimes single, " sometimes several together, and sometimes, when terminal, subracemed; long and slender. *Bractes* opposite, " subulate. *Calyx* from 5 to 7-cleft; segments long, slender, filiform and smooth. *Corolla: tube* twice the length " of the calyx, subclavate; *limb* of from 9 to 12, ensiform, " spreading *segments* which are as long as the tube. *Stamina* within the tube. *Germen* 2-celled, with one *ovulum* " in each cell, attached to the middle of the partition. " *Style* and *stigma* clavate, scarcely reaching to the anthers."

We find by the Flora Indica that twenty native species of Jasmine are cultivated in the Botanic Garden of Calcutta; of which some, from the mountainous and consequently cooler regions of India, have never flowered in that establishment.

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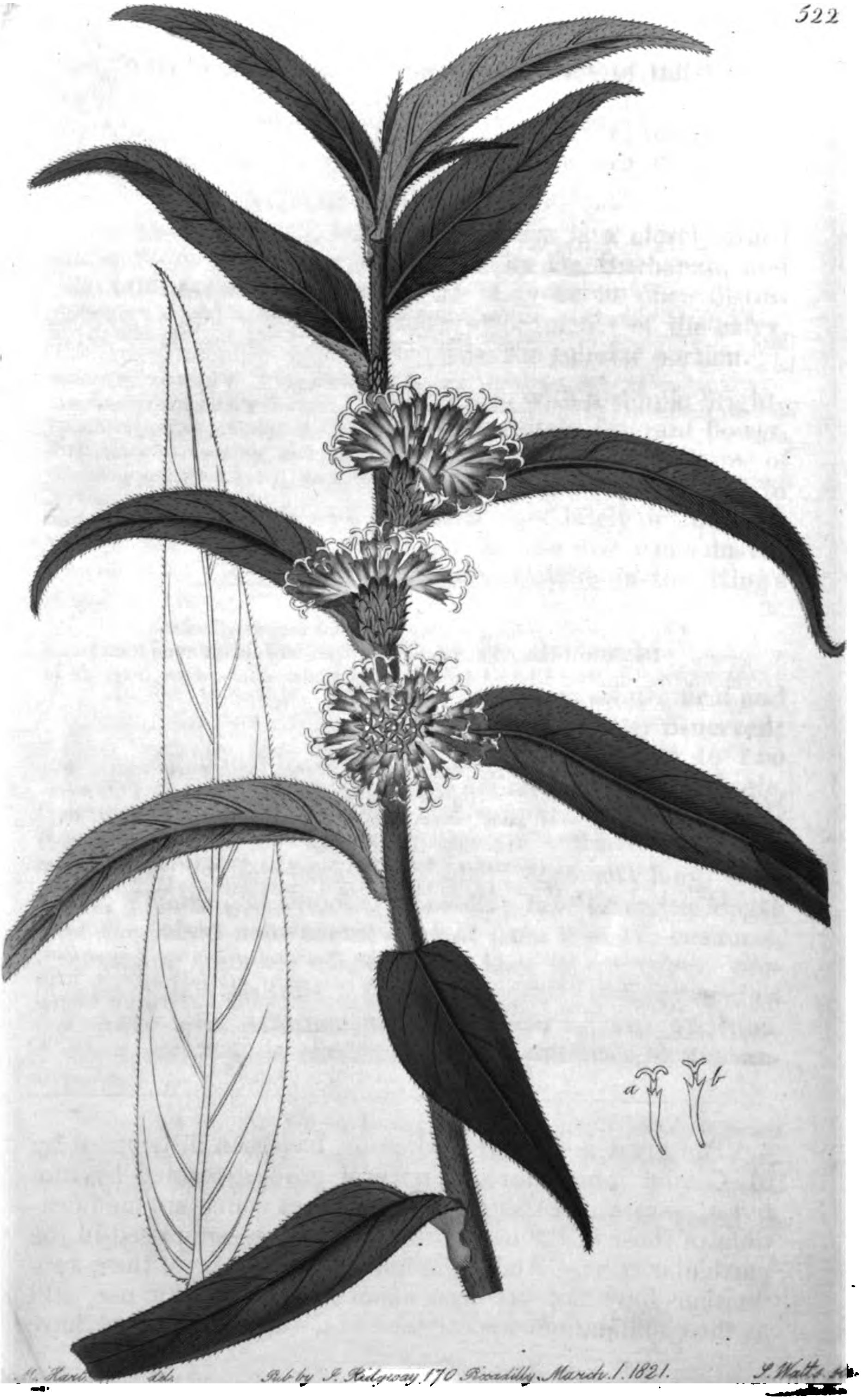

M. Hart del. Pub by J. Ridgway. 170 Piccadilly. March 1. 1821. S. Watts sc.

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VERNONIA sericea; β; *purpurascens.*

Simple-stemmed Vernonia.

SYNGENESIA *POLYGAMIA ÆQUALIS.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. I.*
VERNONIEÆ. *Cassini in journ. de phys.* 88. *(an* 1819*)* 191.

VERNONIA. *Cal.* ovatus, imbricatus. *Stigma* 2-fidum, breviusculum. *Recept.* nudum. *Pappus* duplex; exterior paleaceus, interior capillaris. *Persoon syn.* 2. 404.

Genus, ex D. Cassini, tripartitò disponendum: 1. VERNONIÆ VERÆ *squamis periclinii (foliolis interioribus calycis) appendice subulato spinescente præfixis; quales sunt* noveboracensis, præalta, oligophylla, *et* angustifolia: 2. ASCARICIDÆ *squamis prædictis appendice lato foliaceo subspathulato terminatis; qualis est* anthelmintica: 3. LEPIDAPLOÆ *iisdem inappendiculatis; quales sunt* glauca, fasciculata, arborescens, divaricata, scorpioides, *et* albicaulis. *Cassini in nouv. bulletin. an* 1817. 66; *(textû gallico passim desumptum).*

LEPIDAPLOÆ *foliolis intimis calycinis inappendiculatis.*

V. *sericea,* foliis lineari-lanceolatis subtùs sericeo-incanis utrinque tomentosis subintegris, floribus alternis secundis sessilibus. *Richard in actes de la soc. d'hist. nat. de Paris.* 112.

Vernonia sericea. *Persoon syn.* 2. 404.

(β) flore purpurascente.

(β) Caulis *suffruticosus, simplex, erectus, teres, villoso-canescens,* 4-5-*pedalis v. ultrà, totus supernè foliosus atque flexuoso-recurvus.* Fol. *membranacea, subbifariàm alterna, patentia, angusta, elongato-lanceolata, acuminata, appressè pubescentia, subtùs pilis longioribus sericeis canescentia, subintegra, margine subrepando-reflexa,* 3-4-*uncialia v. longiora latitudine semunciali v. majore, basi angustè subovata:* pet. *latiusculo brevissimo.* Flores *roseo-purpurascentes, foliis superioribus axillares, solitarii, secundi, sessiles.* Cal. *oblongus, ordine plurimo imbricatus uncato-squarrosus, villosus, viridi-subcoloratus,* foliolis (squamis, *Cass.*) *sursùm gradatìm longioribus, ciliatis,* inferioribus (involucri *Cass.*) *lanceolatis suprà subulato-reflexis,* interioribus (periclinii *Cass.*) *purpurascentibus lineari-ligulatis plurimùm longioribus, rectis, obtusis.* Pappus interior *denticulato-capillaris.* Germ. *sericeum.* Recept. *scrobiculato-punctatum.*

The great family of *Compositæ* has been distributed by M. Cassini into numerous natural groups, termed by him *tribes,* severally distinguished by names which are modifications of those of the most prominent genus comprised in the particular tribe. And although the characters of these subdivisions have not yet been shaped for systematic use, still as the combinations appear true to natural affinity, we have

thought it useful even in this stage of their appearance to refer to them by their name.

Vernonia is the chief type of the *Vernonieæ* of M. Cassini, and is technically distinguished from its nearest genera, by a double seedcrown, the inner rank of which is capillary, the outer short and laminar. The genus is divided by the above botanist into three fractions termed by him subgenera; 1. **Vernonia** proper, where the interior leaflets of the calyx are surmounted by a subulate (awl-shaped) spinescent appendage: 2. **Ascaricida**, where these are terminated by a broad foliaceous subspatulate appendage: 3. **Lepidaploa**, where they have no appendage at all.

Our plant agreeing in every respect with the short record of **Vernonia** *sericea*, except that the flower is purple, and not white, as it is stated to be in that; we have not deemed it expedient to separate the two, especially as we know the colour of the flower to have been judged of by M. Richard from a dried sample.

(β) comes exceedingly near to **Vernonia** *arborescens* (**Conyza** *arborescens*. Hort. Kew. ed. 2. 5. 30.), from which it appears to differ only by having longer narrower leaves with a silky haired fur.

The drawing was made from a plant which flowered last December in the hothouse at the nursery of Messrs. Colvill, in the King's Road, Chelsea. It is supposed to have been derived from the Brazils, or possibly Guiana, like the plant of M. Richard.

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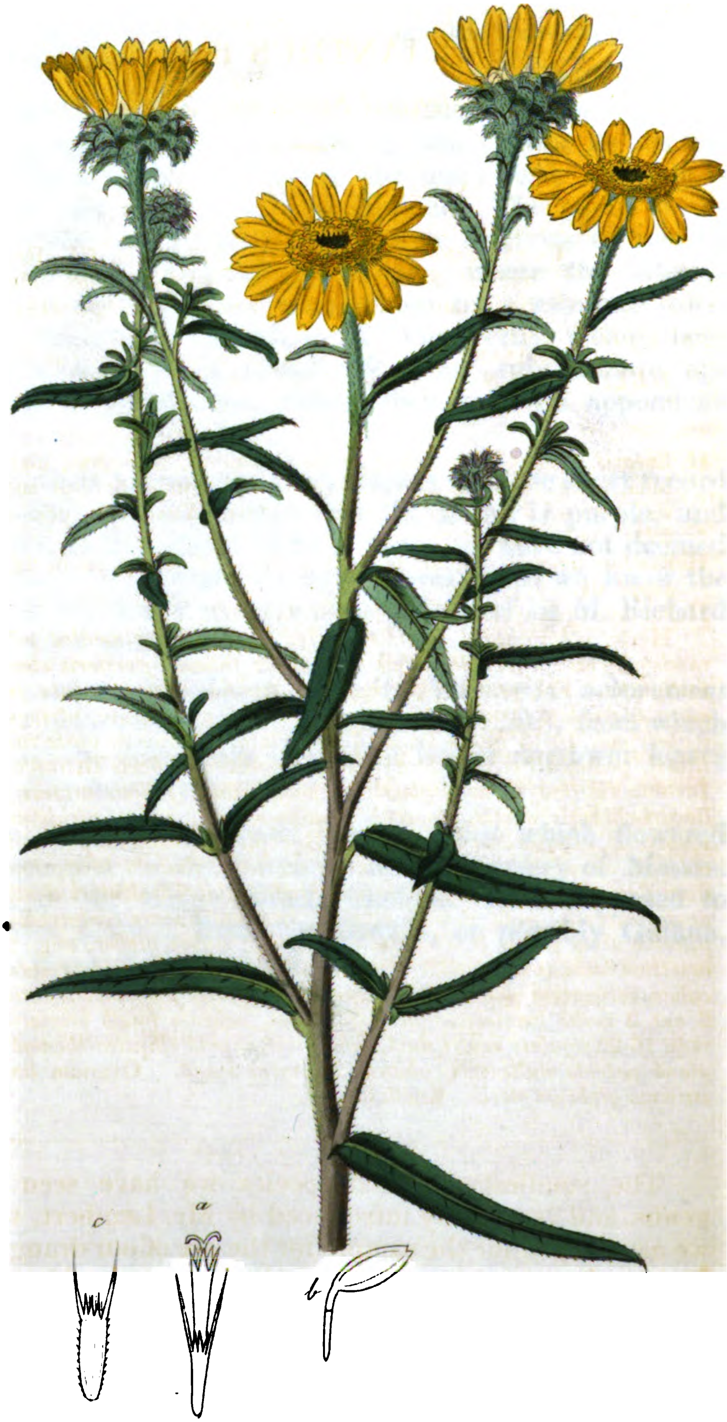

M. Hart. del. Pub by J. Ridgway 170 Piccadilly March. 1. 1821. J. Watts. sc.

HELIANTHUS linearis.

Linear-leaved Sunflower of Mexico

SYNGENESIA *POLYGAMIA FRUSTRANEA.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. VI.* Recept. paleaceum. Sem. apice dentatum aut paleaceum. Flores in plurimis radiati, in paucis flosculosi. Recept. Helenii subnudum.
Heliantheæ. *Cassini in journ. de phys.* 88 *(an* 1819). 191.
HELIANTHUS. Suprà vol. 6. *fol.* 508.

H. *linearis*, foliis alternis aut oppositis, sessilibus, linearibus, margine revolutis, integerrimis, uninerviis, hispido-scaberrimis, floribus subcorymbosis; involucris squarrosis, hispido-scabris. *Kunth nov. gen. et spec.* 3. 222; *(sub* Heliantho squarroso).

Helianthus linearis. *Cavan. ic.* 3. 9. *t.* 212. *Willd. sp. pl.* 3. 2244; *enum. suppl.* 61.

Helianthus squarrosus. *Kunth loc. cit. tab.* 377.

Herba *subbipedalis.* Caulis *erectus ramosus teretiusculus piloso-hirtus, ramis alternis; inferis sterilibus abbreviatis foliosis, floriferis elongatis subfastigiatis.* Fol. *alterna aut opposita sessilia linearia acuta integerrima margine revoluta* (1-*nervia?) nervo subtùs valdè prominente, utrinque hispido-scaberrima,* 14-15 *lineas longa,* ⅔ *lineæ lata.* Flores *ex apice ramorum solitarii, pedunculi erecti subcorymbosi; magnitudine floris* Bidentis cernuæ. Involucrum (calyx) *hemisphæricum polyphyllum foliolis arctiùs imbricatis lineari-oblongis acutis, supernè hispido-scabris, apice viridibus, reflexo-squarrosis, exterioribus brevioribus.* Recept. *planiusculum paleaceum, paleis oblongis acuminatis carinatis glabris scariosis, flosculo brevioribus.* Flosc. disci *flavi creberrimi tubulosi hermaphroditi glabri* 5-*dentati dentibus ovatis acutis enerviis:* anth. *demùm exsertæ:* ovarium *lineare compressum glabrum pilosiusculum paleis* 3 *subulatis coronatum;* stylus *glaber,* stig. 2-*partitum exsertum laciniis revolutis.* Achenium (semen) *lineare compressum pilosiusculum coronatum paleis crebris minutis subulatis fimbriato-scabris deciduis,* 2 *aut* 3 *multò longioribus aristæformibus, achenio paulò brevioribus:* flosc. radii 16-20 *ligulati neutri flavi, tubo brevi, ligulâ elliptico-oblongâ* 3-*dentatâ planâ patente multinervi, glabrâ,* 2½ *lineas longâ.* Ovarium *lineare tenuissimum glabrum sterile.* Kunth loc. cit.

The smallest flowered species we have seen of this genus, and very lately introduced by Mr. Lambert, to whom we are obliged for the sample for the use of our draughtsman. The seed came from the Botanic Garden at Madrid; but had been originally derived from Mexico, where the plant was observed by Messrs. Humboldt and Bonpland near Guanacuato, at the elvevation of about 1100 fathom above the level of the sea.

An herbaceous perennial? from two to three feet high: *stem* upright, round, branching, roughishly furred; *branches* alternate, lower ones sterile short and leafy, flowerbearing ones growing nearly to a level. *Leaves* both alternate and opposite, sessile linear pointed quite entire turned down at the edge (one-nerved?) with the nerve very prominent at the under side, 14-15 lines in length, narrow. *Flowers* at the ends of the branches, solitary; *peduncles* upright, forming a kind of corymb. *Calyx* somewhat hemispherical, squarrose (ragged), manyleaved; *leaflets* closely imbricated linearly oblong pointed, roughly furred towards the upper part, green at the top, reflex, outermost the shortest. *Receptacle* nearly flat, chaffy, *paleæ (chaffs)* oblong taper-pointed keeled smooth scariose, shorter than the florets of the disk. *Florets of the disk* deep yellow very numerous tubular with perfect stamens and pistil, smooth 5-lobed, lobes ovate pointed without any nerve: *anthers* finally elevated above the orifice of the floret; *germen* linear compressed smooth slightly furred with a seedcrown of 2-3 subulate paleæ; *style* smooth; *stigmas* 2, protruded revolute. *Seed* linear compressed slightly furred, with a seedcrown of numerous subulate roughly fringed deciduous minute paleæ, among which are from 2 to 3 which are much longer than the rest and awnshaped, being in fact but little shorter than the seed itself: *florets of the ray* 16-20, ligulate, without stamen or pistil, deep yellow, tube short, blade or lamina elliptically oblong 3-toothed flat spreading many-nerved smooth, 2½ lines long; *germen* linear thin smooth abortive.

We had no opportunity of inspecting the plant from which the drawing was made; and have borrowed the description from Messrs. Cavanilles and Kunth.

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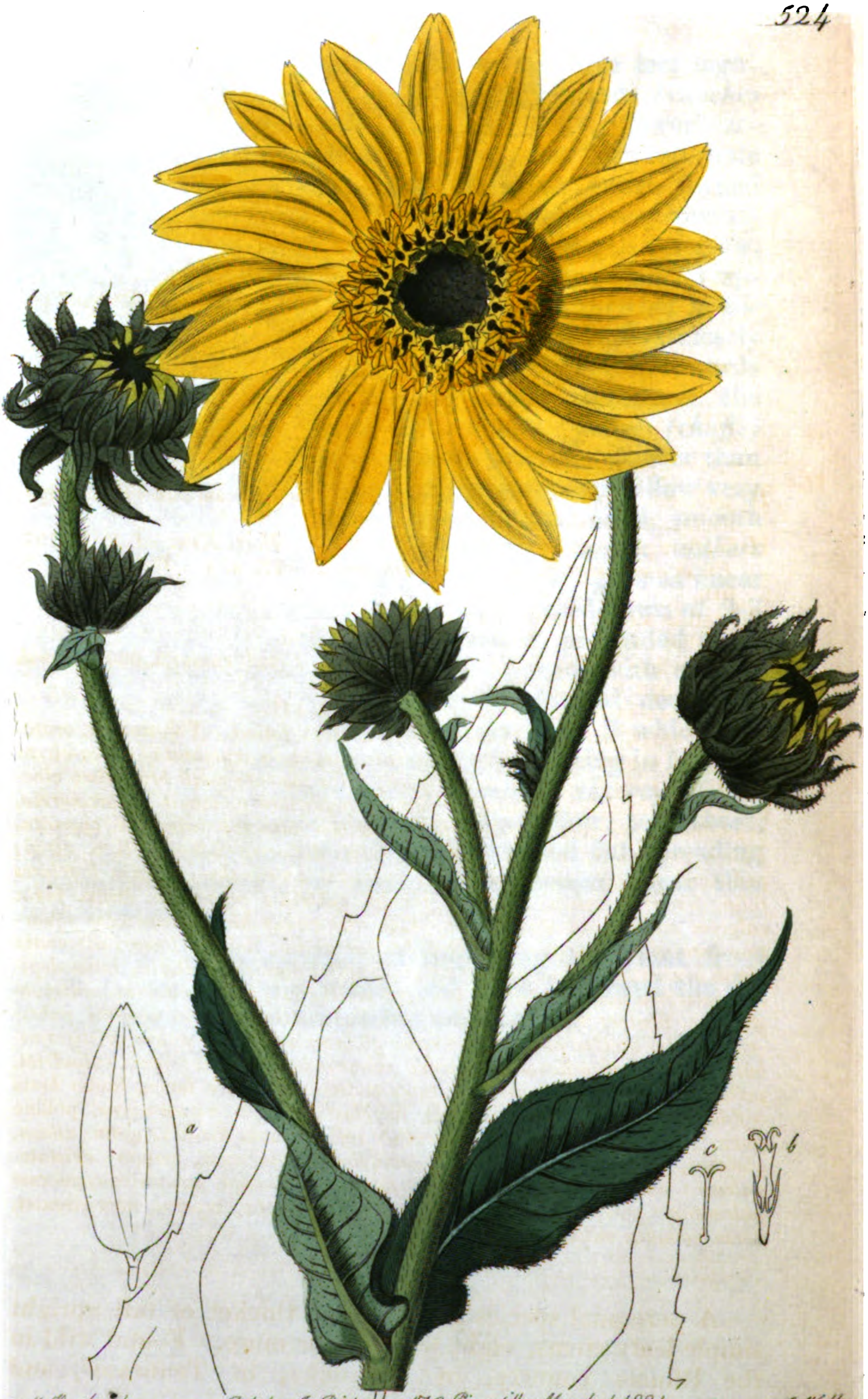

M Hart. del. Pub by J. Ridgway 170 Piccadilly March. 1. 1821. J. Watts. sc

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HELIANTHUS pubescens.

Illinois Sunflower.

SYNGENESIA *POLYGAMIA FRUSTRANEA.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. VI.* Recept. paleaceum. Sem. apice dentatum aut paleaceum. Flores in plurimis radiati, in paucis flosculosi. Recept. Helenii subnudum.
Heliantheæ. *Cassini in journ. de phys.* 88 (*an* 1819). 191.
HELIANTHUS. Suprà vol. 6. *fol.* 508.

H. *pubescens,* foliis oppositis ovato-cordatis amplexicaulibus villosis triplinerviis, caule piloso. *Vahl symb.* 2. 92.
Helianthus pubescens. *Willd. sp. pl.* 3. 2240. *Hort. Kew. ed.* 2. 5. 127. *Pursh amer. sept.* 2. 570. *Nuttall gen.* 2. 177. *n.* 4. *Willd. enum.* 2. 919.
Helianthus mollis. *Lamarck encyc.* 3. 81.
Helianthus canescens. *Michaux bor. amer.* 2. 140.
(β) Helianthus mollis. *Willd. sp. pl.* 3. 2240. *Ejusd. enum.* 2. 920. *Pursh amer. sept.* 2. 572. *Nuttall gen.* 2. 178.
Helianthus tomentosus. *Michaux bor. amer.* 2. 141.

Herbaceus, perennis. Caules *orgyales erecti foliosi.* Fol. *sessilia, ovato-lanceolata remotè appressèque subserrata cuspidato-acuminata, opaco-virentia, suprà pube strigillosâ brevi aspera, infrà tomento molli brevissimo cinerascentia, sesuncialia latitudine duplo angustiore v. magìs, subtrinervia, gradatìm in parvula decrescentia, superiora alterna, inferiora opposita.* Flores *paniculati, plures, nutantes, lutei, diametro 2-3-unciali v. circà;* pedunculi *alterni, axillares præter summum terminalem, sæpiùs breviores folio, hirsuti, supernè curvati, foliolis subtrinis supernè v. etiam juxta calycem muniti, interdùm divisi.* Cal. *atro-virens hirsuto-canescens squarroso-laxatus divaricatus, bis ferè brevior radio;* foliola *lineari-attenuata plana acutissima ordine alterno subquadruplici disposita, ciliata, intùs depilia, interiora paulò minora.* Radius *multi-*(20?) *florus, citrinus, contiguo-stellatus, neuter:* flosc. *lanceolati, subplicato-striati, extùs obsoletè pubescentes,* tubo *brevissimo;* germine *casso glabro albo,* pappi *paleis aristiformibus:* discus *nigro-flavescens, denuò subconoideo-convexus:* flosc. *cylindrici, pellucido-flavicantes glaberrimi,* tubo *multotiès breviore* fauce, limbo *brevi 5-fido lacinulis ovato-acuminatis;* fil. *elastica;* anth. *viridi-nigræ,* polline *flavo:* stig. 2 *lineari-angusta, spiralitèr reflexa extùs hirsuta:* germ. *album, glabrum, turbinato-elongatum, subanguloso-compressum,* pappo *aristato-paleaceo albo, duplo ferè breviore flosculo.* Recept. *subconico-convexum paleaceum:* paleæ *naviculari-complicatæ acuminatæ, supernè atro-virentes, dorso carinatæ villosæ atro-rubentes.*

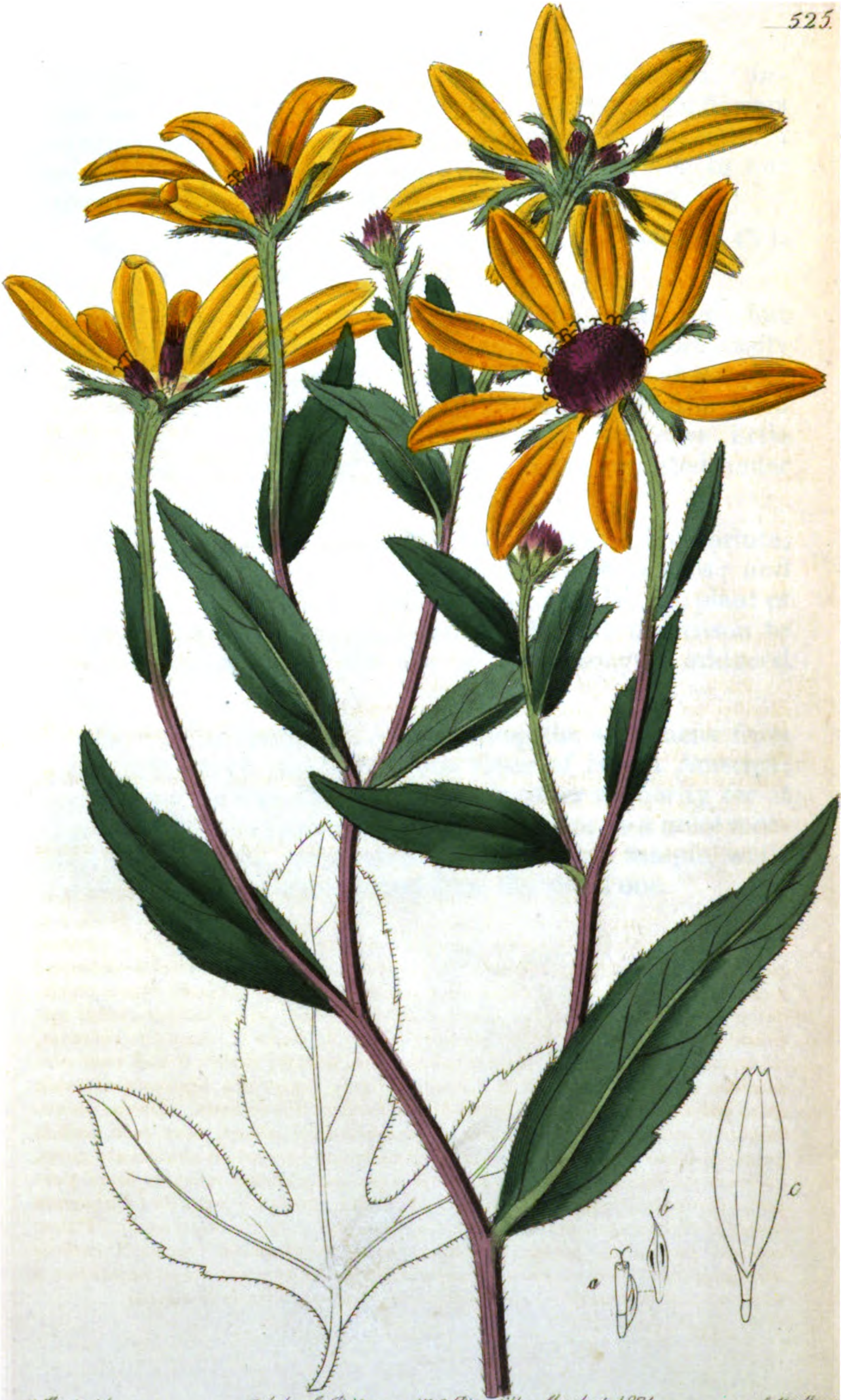
A perennial species growing to a thicket of tall upright simple leafy stems, eight feet high or more. Found wild in the Illinois country, in Kentucky, in Tennessee, and according to Mr. Pursh, in Virginia and Pensylvania. Introduced by Messrs. Lee and Kennedy in 1795. The flowers continue long in succession, and make a fine appearance about September and October.. Not very common in our gardens; where it has been mistaken for *strumosus*.

The drawing was made at the nursery of Messrs. Colvill, in the King's Road, Chelsea.

The leaves are rough and hard on the upper side, but soft and downy on the under, a circumstance more easily distinguished by the touch than the sight. In dried samples the softness of the under surface, so striking in the fresh leaves, is scarcely perceptible, and has, we have little doubt, been the cause of the species being repeated under the head *mollis*.

We know by the sample in the Banksian Herbarium, that our plant is the *pubescens* of the Hortus Kewensis; and by another in that of Mr. Lambert, that it is also the plant of the Flora Americæ Septentrionalis; and have no reason to doubt its belonging to the rest of the synonymy adduced above.

We find no sample of *mollis* among the specimens from which Mr. Pursh constructed his Flora of North America; and do not believe that he had any other authority for it than Willdenow's record, which we believe to be a mere repetition of *pubescens*, determined from the fresh sample, while the other has been determined from the dried one.



M. Hart. del.   Pub. by J. Ridgway 170 Piccadilly March. 1. 1821.   J. Watts. sc.

RUDBECKIA triloba.

Eight-rayed Rudbeckia.

SYNGENESIA *POLYGAMIA FRUSTRANEA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.

CORYMBIFERÆ. *Jussieu gen.* 177. *Div. VI.* Recept. paleaceum. Semen apice dentatum aut paleaceum. Flores in plurimis radiati, in paucis flosculosi.

HELIANTHEÆ. *Cassini in journ. de phys.* 88 *(an* 1819). 191.

RUDBECKIA. *Flores* radiati, ligulis neutris. *Cal.* duplici serie polyphyllus subæqualis patens. *Sem.* apice marginata, margine membranaceo 4-dentato. *Recept.* conicum. *Juss. l.* c. 189. *Herbæ: fol. alterna, indivisa, lobata v. pinnatifida: flores terminales; discus sæpè fuscus, radius luteus, rarò fuscescens, semel purpurascens. Stigmata sæpè obtusa.* Nuttall gen. 2. 178; (ex angl.)

R. *triloba*, hirsuta: foliis inferioribus tripartitis, superioribus indivisis, lato-lanceolatis. *Michaux bor. amer.* 2. 144.

Rudbeckia triloba. *Linn. sp. pl. ed.* 2. 2. 1280. *Mill. dict. ed.* 8. *n.* 3. *Hort. Kew. ed.* 2. 5. 130. *Pursh amer. sept.* 2. 575. *Willd. sp. pl.* 3. 2247. *Nuttall gen.* 2. 178. *n.* 11.

Rudbeckia subtomentosa. *Pursh amer. sept.* 2. 575.

Rudbeckia aristata. *Solander in sched. et herb. banks. Pursh amer. sept.* 2. 574. *Nuttall gen.* 2. 178. *n.* 7.

Rudbeckia foliis inferioribus trilobis superioribus indivisis. *Gron. virg. ed.* 2. 130; *(affirmante exemplario archetypo).*

Rudbeckia foliis trilobis. *Id. ed.* 1. 180.

Chrysanthemum cannabinum virginianum hirsutum disco nigro, petalis aureis radiato. *Pluk. alm.* 100. *t.* 22. *f.* 2.

(α) foliis hirtellis, manifestiùs dentatis, calyce reflexo (Carolinæ). *Mich. l.* c.

(β) foliis subtomentosis, calyce incumbente (Regionis Illinoensis). *Mich. l.* c.

Biennis? Caulis *hispidus, corymboso-ramosus.* Fol. *hispida,* summa, *subsessilia, lanceolata, oblonga, sub3nervia,* inferiora *spathulato-oblonga;* ima *nonnulla triloba.* Pedunculi *rubicundi, sulcato-striati:* flores *erecti, diametro subbiunciali:* calyx *simplex viridis stellato-patentissimus, extùs appressè hirsutus, duplo brevior corollâ;* foliola 8, *linearia, angusta, obtusula, distantia, subbiseriata.* Radius *flavissimus neuter;* flosc^{li}. 8 *unà cum germinibus omninò divaricati et distantes;* ligula *lanceolata biplicata obtusula extùs pilis caducis aspersa;* tubus *brevis horizontalis villosus.* Discus *subrotundus, fusco-sanguineus lucidus;* flosc. *cylindrici glabri,* faux *tubo pallido germinis isoperimetro vix amplior,* limbus *brevis atrorubens connivens:* germ. *subroseo-pallescens obversum oblongum 4-gonum glabrum margine brevi purpureo coronatum;* stig. 2 *subclavato-filiformia, pruinoso-capitata (Palparum instar) divergentia fusco-punicantia, exserta.* Anth. *aterrimæ.* Paleæ *supernè punicantes nitidæ, oblongæ, aristato-cuspidatæ, navis 2 callosis atrosanguineis lævibus lineari-fusiformibus angustissimis longitudinalibus à faciè utrâque prominulis intra marginem utriusque lateris insignitæ.*

Rudbeckia *aristata* of the above synonymy was proposed as a species many years ago by Dr. Solander, from samples still in the Banksian Herbarium; but proving the same with the Linnean B. *triloba*, of which a prototype sample is also found in that Herbarium, it had remained dormant in manuscript until carelessly revived in Mr. Pursh's Flora of North America.

Neither does R. *subtomentosa* of Pursh appear to rest upon solid foundation, being derived from one of the two varieties of Michaux's *triloba*, to which Mr. Pursh has attributed the additional difference of a calyx of the full length of the ray, to distinguish it from the other which constitutes his *subtomentosa*, where the calyx is in the proportion of only half the length of the ray. But a reference to the sample of Mr. Pursh's *triloba* in the Lambertian Herbarium, convinces us that this plant has not a calyx the full length of the ray, but only half the length, as in *subtomentosa*, and that Mr. Pursh has confounded the nearest floral leaflets with those of the true calyx.

Triloba is native of Carolina and the Illinois country, and is said to have been cultivated by Mr. Jacob Bobart before 1699; but is still far from common in our collections. The drawing was made from a plant that came out of Mr. Lambert's garden at Boyton; where it had been raised from imported seed and cultivated in the common ground.

The three-lobed leaves are all situated at the lower part of the stem, and, in the garden plant at least, are very few comparatively with the undivided ones. The leaflets of the calyx were 8, in all the flowers we saw, and the florets of the ray likewise 8. The *paleæ* or *bractes* that separate the florets in the receptacle are smooth, crimson at the top, and awn-pointed, with two black-red linear slightly elevated vertical calli on each side a little within the margin.

It is marked in Hortus Kewensis for a biennial plant.

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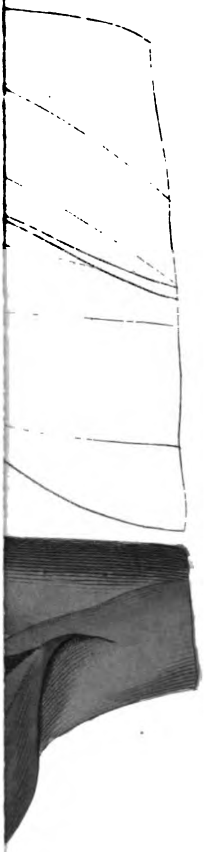

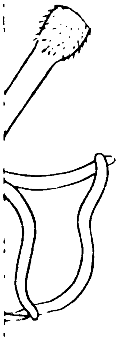

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HEDYCHIUM elatum.

Comtesse de Vandes Garland-flower.

MONANDRIA *MONOGYNIA.*

Nat. ord. CANNÆ. *Jussieu gen.* 62.
SCITAMINEÆ. *Brown prod.* 1. 305.

HEDYCHIUM. *Corollæ* tubo longo gracili; limbo utroque tripartito, interiore resupinato. *Anthera* duplex, nuda. *Capsula* 3-locularis, 3-valvis: *semina* numerosa, arillata. *Embryo* simplex, et perispermo et vitello dotatus. *Roxb. fl. ind.* 9; *(è textû angl.)*

H. *elatum,* foliis oblongo-lanceolatis glabris, spicis laxis: fasciculis ternis subtrifloris, laciniis interioribus limbi cuneato-linearibus, labelli laminâ bifidâ. *Brown MSS.*

Caulis 8-10-*pedalis.* Folia *inferiora elliptico-lanceolata, superiora oblongo-lanceolata, omnia acumine subulato-filiformi citiùs marcescenti.* Spica 6-*uncialis:* fasciculis *distinctis, sæpissimè ternis, patentibus, trifloris.* Ovarium (germen) *villosum.* Perianthium exterius (calyx) *spathaceum scariosum pubescens:* interius (corolla) *tubo cylindraceo ochroleuco, limbo exteriore tripartito laciniis angusto-linearibus acutis, interiore laciniis lateralibus cuneato-linearibus apice parùm dilatato obliquo:* labellum *ungue brevi lato-lineari, laminâ circumscriptione ovatâ lobis dimidiato-ovatis obtusiusculis.* Filamentum *labello longius.* Antheræ *linearis basi bifidâ lobis polliniferis.* Stigma *cyathiforme indivisum ciliatum.* Nectaria (stamina sterilia) 2, *brevissima, teretiuscula, approximata.* Brown MSS.

An unrecorded species, determined and described by Mr. Brown from native samples in the Banksian Museum, of which that gentleman is now, fortunately for science, in the well-earned possession. The samples formed part of a collection of Nepaulese plants transmitted by Dr. Wallich, the able superintendent of the Calcutta Botanic Garden, by whom, as was plain from the inscribed notice, they had been taken for *speciosum,* accurately described by himself in the Flora Indica of Roxburgh; but on examination by Mr. Brown, proved to be essentially distinct from that species.

In *speciosum* the spike is much longer, the fascicles scattered and 2-flowered, and the label of the flower entire and sharp-pointed, in *elatum* the spike is much shorter, the fascicles in verticilli (whorls) of three, and 3-flowered, and the label bifid with bluntish lobes.

The drawing was taken in December last, in the hothouse at the extensive and well-ordered botanical establishment of Comtesse de Vandes, at Bayswater, from a plant which flowered probably for the first time in Europe, and had been raised from seed received from Dr. Wallich. Two stems were produced, each nearly ten feet high, terminated by a spike of cream-coloured flowers with red filaments. They did not appear to us to have any scent, while those of *speciosum* are said to be very fragrant.

" *Lower leaves* elliptically lanceolate, *upper* oblongly lanceolate, all with a subulately filiform earlier withering point. *Spike* 6 inches long: *flower-fascicles* apart, most frequently in threes, spreading, 3-flowered. *Germen* villous. *Calyx* spathelike, scariose, furred. Tube of *corolla* cylindrical cream-coloured, *outer limb* 3-parted, with narrow linear pointed segments, *inner* with cuneately linear ones and slightly widened slanting apex: foot of the *label* widely linear, blade of an ovate circumference, with semiovate bluntish lobes. *Filament* longer than the label: *anther* linear, bifid at the base with polliniferous lobes. *Stigma* cyathiform (long-cupped) undivided fringed. *Barren stamens* 2, very short, subcylindrical, near." *From the latin of Mr. Brown.*

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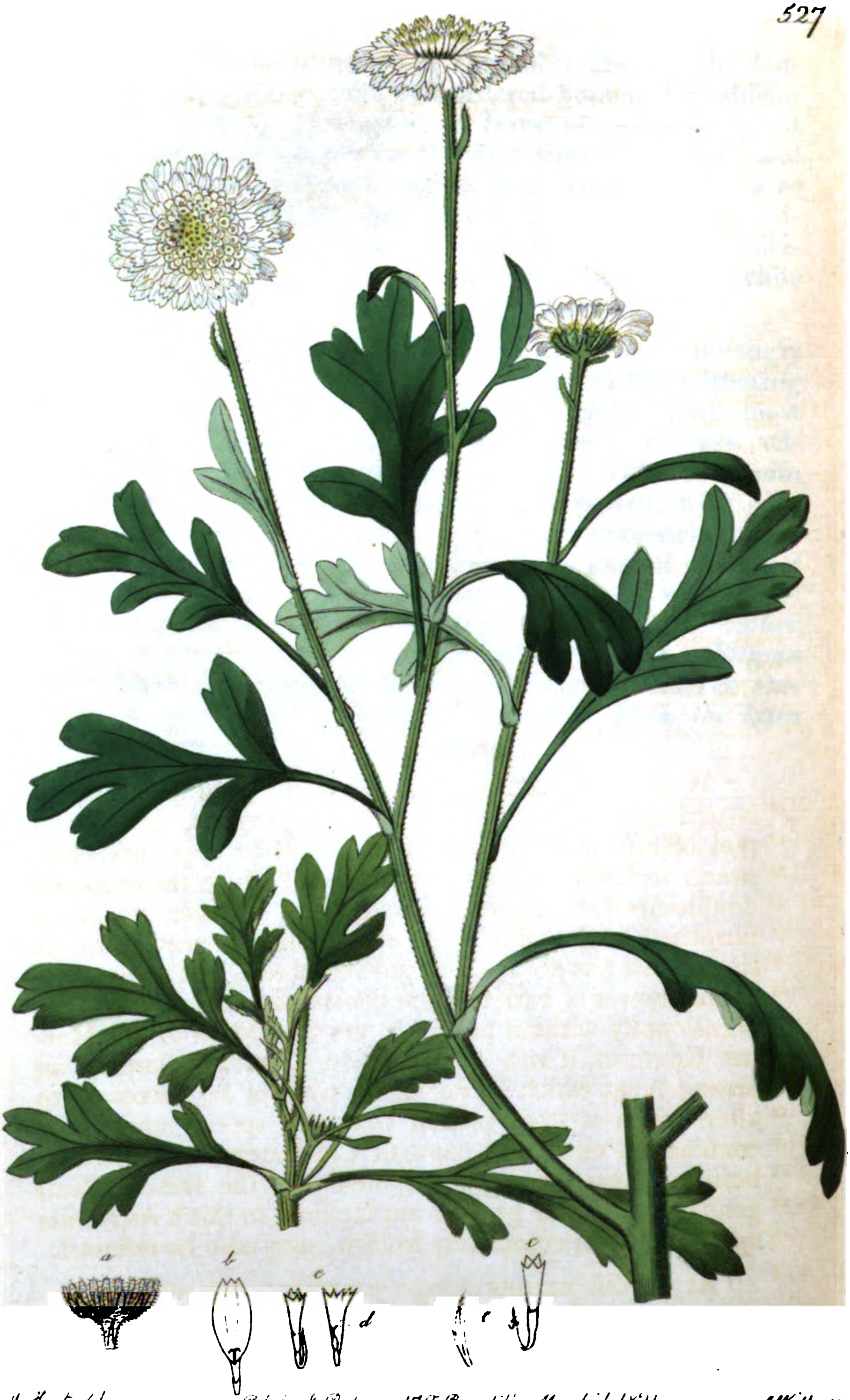

M. Hart. del. Pub by J. Ridgway 170 Piccadilly March 1. 1821. J. Watts sc.

ANTHEMIS apiifolia.

Parsley-leaved chinese Chamomile.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. V.* Receptaculum paleaceum. Semen nudum seu non papposum. Flores plerumque radiati, rarò flosculosi.
Anthemideæ. *Cassini in journ. de phys.* 88 (*an* 1819).

ANTHEMIS. *Flores* radiati, ligulis lanceolatis numerosis. *Calyx* imbricatus subæqualis hemisphæricus. *Folia sæpè multifida; flores sæpè in ramulis terminales; ligulæ albæ aut luteæ, rarò nullæ.* A Matricariâ *discrepat receptaculo paleaceo. Calyx* A. arabicæ *quasi bracteis obvallatus.* Juss. l. c. 185.

Div. Radio discolore s. albo.

A. *apiifolia,* foliis glaberrimis pinnatifidis: lobis cuneatis trifidis incisisve, floribus solitariis, involucri foliolis linearibus apice scariosis. *Brown MSS.*
Pyrethrum chrysanthemifolium. *In hortis.*

Involucrum (calyx) *hemisphæricum, foliolis subæqualibus, appressis, linearibus, apice brevi scarioso vix dilatato.* Pappus: *margo membranaceus brevissimus indivisus.* Receptaculum *convexiusculum, paleaceum paleis linearibus acutis.* Brown MSS.

“ With our present imperfect knowledge of this plant, it is perhaps necessary to refer it to Anthemis, though in real affinity it will probably be found to approach more nearly to Chrysanthemum *indicum,* of which the supposed double-flowered varieties are in like manner generally furnished with *paleæ.* As that plant, however, in its single state has always a naked receptacle, and some of its double-flowered varieties are constantly, while others are occasionally without paleæ, in the 2d edition of the Hortus Kewensis it was continued in Chrysanthemum; an arrangement which it would not perhaps be necessary to alter, were it even proved that two species have been confounded under the name of Chrysanthemum *indicum,* both of them belonging decidedly to the same natural genus; and to this genus I am inclined to think Anthemis *apiifolia,* when completely known, may also be referred.

“ As to the narrow *margo* crowning the seed, on account of which our plant has been considered a Pyre-

"THRUM, it does not appear to me to constitute a sufficient "generic character, and it equally exists in CHRYSANTHEMUM *indicum*, particularly in the single-flowered specimen "of the Linnean Herbarium." *Brown MSS.*

The present is an unpublished species, as yet known only in a double-flowered, and consequently imperfect, state.

It is said to have been introduced from China by Mr. Barclay; and to have come to the garden of the Horticultural Society (where the drawing was taken in January last) under the name of PYRETHRUM *chrysanthemifolium*.

Kept in the greenhouse, where it produces a long succession of blossom.

If, as the case is supposed to be in CHRYSANTHEMUM *indicum*, the *paleæ* are an effect of the luxuriance attending the double-flowered state, and should prove to be absent in the single flower, CHRYSANTHEMUM, and not ANTHEMIS, would be the place of our plant.

For the above account we are indebted to the unwearied liberality of Mr. Brown, who has taken this opportunity to account for his retaining CHRYSANTHEMUM *indicum* in that genus in the 2d edition of the Hortus Kewensis, and for not following some of his predecessors in referring the species to ANTHEMIS.

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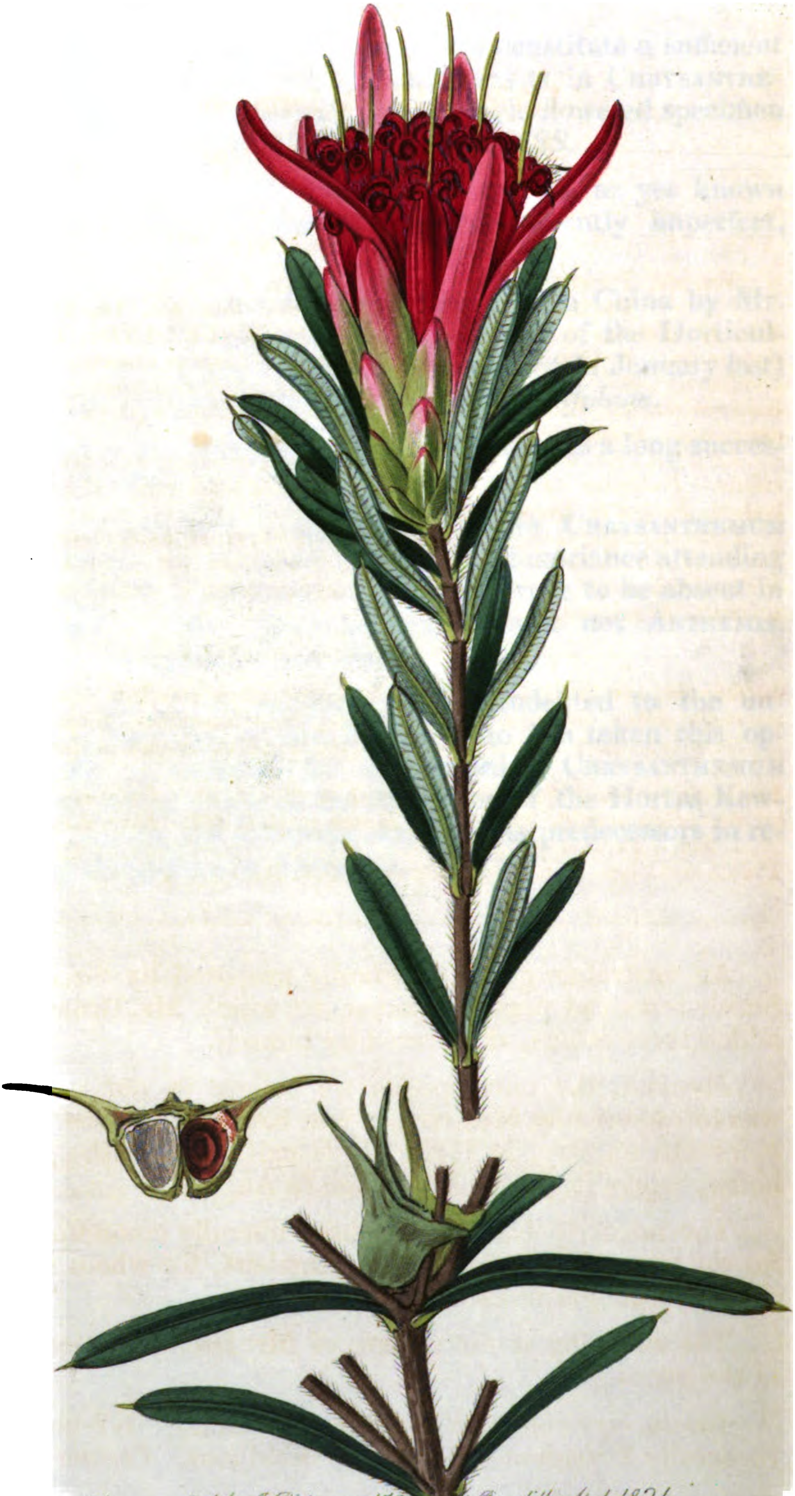

del. Pub. by J. Ridgway 170 Piccadilly Ap. 1. 1821. J. Watts

LAMBERTIA formosa.

Red-flowered Lambertia.

TETRANDRIA *MONOGYNIA.*

Nat. ord. Proteæ. *Jussieu gen.* 78. *Div. I.*
Proteaceæ. *Brown in trans. linn. soc.* 10. 15, *seqq. Div. II.* Fructus dehiscens. *Subdiv.* A. *UNILOCULARIS.* *Ovarium* dispermum. *Fructus* quandòque monospermus. *Antheræ* exsertæ, apicibus corollæ revolutis. *Glandulæ* hypogynæ 4, distinctæ, v. connatæ. *Involucrum* coloratum, deciduum, uni-multiflorum, receptaculo plano. *Semina* marginata. *Stigma* subulatum.

LABERTIA. *Cor.* tubulosa, 4-fida; laciniis spiralitèr revolutis, staminiferis. *Folliculus* coriaceo-ligneus. *Involucrum* 1-7-florum. *Recept.* epaleatum. *Brown in Hort. Kew. ed.* 2. 1. 211.

Frutices *pulcherrimi, ramis verticillatis.* Folia *terna, sæpiùs integerrima.* Involucra *terminalia, solitaria, colorata, in plerisque 7-flora, rarò 1-flora.* Folliculi *subcuneati, apice hinc cuspidati indè bicornes, v. mutici, quandòque echinati. Brown prod.* 1. 386.

L. *formosa,* involucris 7-floris: foliolis interioriobus corollam æquantibus, stylis pilosis, folliculis hinc cuspidatis; indè bicornibus, foliis lineari-lanceolatis cuspidato-mucronatis margine revolutis. *Brown in linn. trans.* 10. 188.

Lambertia formosa. *Smith in linn. trans.* 4. 228. *t.* 20. *Andrews's reposit.* 69. *Cavan. ic.* 6. 32. *t.* 547. *Brown prod.* 1. 387. *Hort. Kew. ed.* 2. 1. 211. *Persoon syn.* 1. 116.

Protea nectarina. *Wendl. sert. hannov.* 4. 5. *t.* 21.

An australian genus, originally proposed by Sir James Smith from the present species, to which Mr. Brown has added three others, discovered by himself.

Formosa, the only species we believe in our gardens, was introduced by Messrs. Lee and Kennedy, of the Hammersmith nursery, in 1788. It is cultivated in the greenhouse, where it flowers from June to August.

The masterly drawing has been liberally communicated for the use of this work by Mr. Lambert, for whom it was done by Mr. Ferdinand Bauer.

The following is the version of Mr. Brown's description of the genus.

Involucres coloured, terminal, solitary, 1-7-flowered (generally 7- seldom 1-flowered), deciduous. *Corolla* tubu-

lar, 4-cleft, segments rolled back spirally, stamenbearing at the top. *Anthers* protruded. *Germen* with two ovula. *Stigma* subuláte (awl-shaped). *Hypogynous glandules* (small glandular bodies situated under the pistil) 4, sometimes distinct, sometimes connected. *Receptacle* flat, chaffless (without *paleæ,* the *bractes* of an aggregate inflorescence). *Follicles* * coriaceously woody, unilaterally dehiscent, one-celled, somewhat cuneate (wedge-shaped), spear-pointed on one side of the top, bicornous on the other, or else with a pointless top, or in some instances echinated (beset with prickles). The species constitute a group of beautiful shrubs with leaves in whorls of threes and generally quite entire.

Formosa is distinguished from the rest by 7-flowered involucres, having the interior leaflets even with the corolla, hairy styles, follicles spear-pointed on one side bicornous on the other, linearly lanceolate spear-pointedly tipped leaves which are rolled back at the edge.

In a luminous exposition of the nature of the inflorescence in *Compositæ,* Mr. Brown makes the following incidental mention of LAMBERTIA. "In all the known species of this genus the leaves are verticillate, and uniformly in threes: in *formosa* and *inermis* the involucrum constantly contains seven flowers, while in *uniflora* it is reduced to one flower. The seven flowers of the former species I consider as made up of two verticilli, in number of flowers corresponding with that of the leaves, and of a single central or terminal flower; to which terminal flower *uniflora* appears to be reduced." *Brown in trans. linn. soc.* 12. 100.

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* When, in another part of this work, we defined *follicle,* "an indehiscent seedvessel;" we regarded 'dehiscence' as technically limited to the symmetrical disjunction of the valves of plurivalvular seedvessels, and not comprehending the one-seeded opening of the univalvular kinds. But we were wrong.

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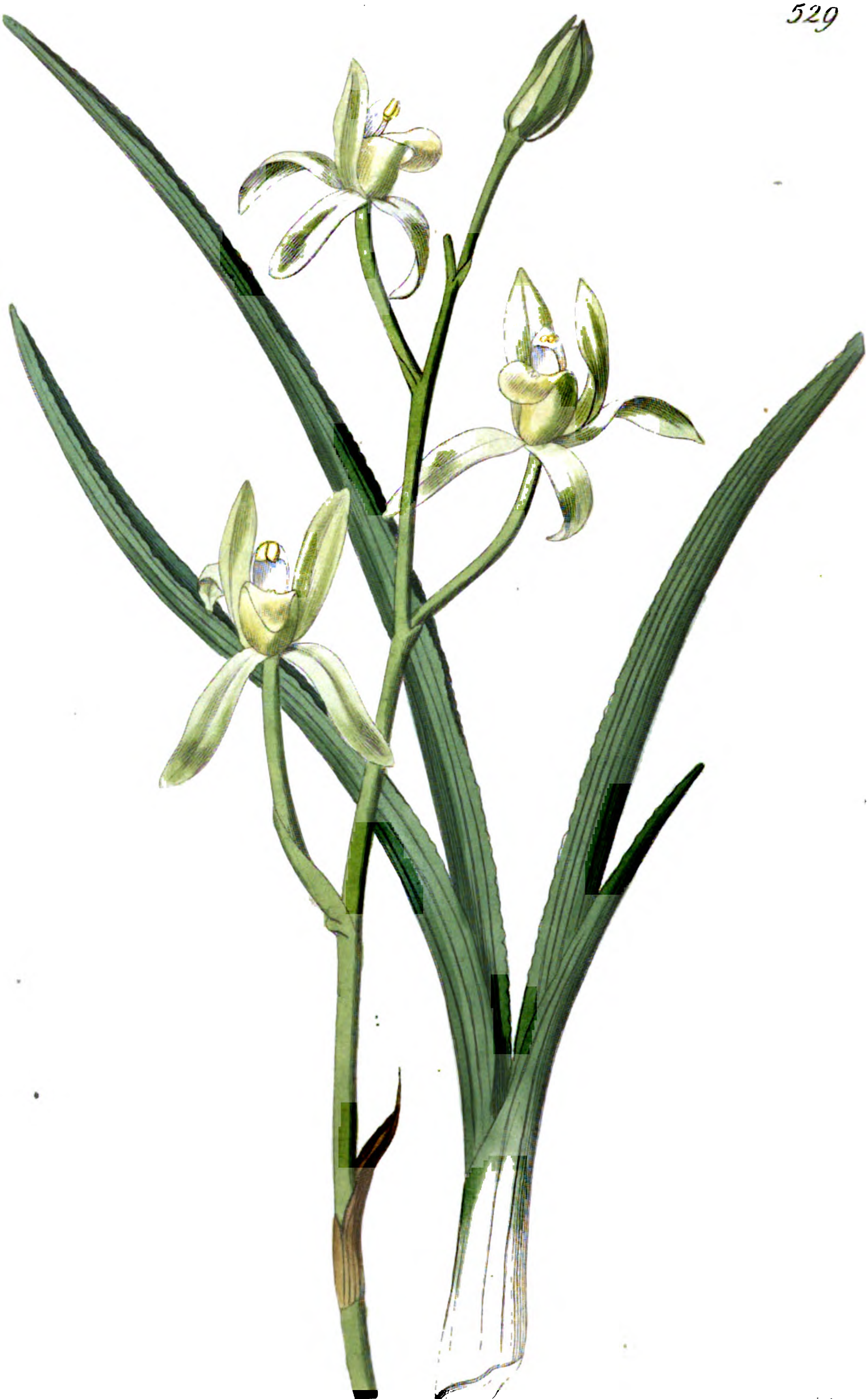

H. Hart. del. Pub by J Ridgway 170 Piccadilly April.1.1821. S. Watts. sc.

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CYMBIDIUM xiphiifolium.

Xiphium-leaved Cymbidium.

GYNANDRIA *MONOGYNIA.*

Nat. ord. ORCHIDEÆ. *Brown prod.* 1. 309. *Sect. V.* Anthera terminalis, mobilis, operculiformis, decidua. Pollinis massæ cereaceæ, læves. *Parasiticæ, paucæ Terrestres.* Brown prod. 1. 330.

CYMBIDIUM. Labellum ecalcaratum, concavum, cum basi (simplici nec productâ) columnæ articulatum. *Petala* patentia distincta. *Massæ pollinis* duæ, posticè bilobæ. *Brown in Hort. Kew. ed.* 2. 5. 213.

OBS. *Genus nimis artificiale, posthàc certè dividendum.* Brown prod. 1. 331.

Cymbidia vera.

C. *xiphiifolium*, foliis crassiusculis lineari-subulatis canaliculatis nervoso-striatis crenulatis æquantibus scapum; spicâ pauci(4)florâ, labello immaculato.

Scapus *foliorum longitudine, 4-florus.* Flores *virides, majusculi.* Cor. 5-*petala:* pet^s. 3 *exterioribus ovato-lanceolatis, patentibus,* 2 *interioribus conformibus columnâ parallelis, exterioribus latioribus.* Labellum *cum columnâ articulatum, eâque brevius, cymbiformi, columnæ applicito, medio intùs 2-calcarato;* laminâ *ovato-undulatâ deflexâ ungue breviore.* Columna *libera 1-pteris, laciniis pauld brevior, anticè concava.* Anth. *terminalis persistens opercularis, 1-locularis utrinque intùs juxta cardinem membranâ auriculata.* Massæ pollinis 4, *per paria cohærentes, cereaceæ, obtusè triangulares, glandulæ transversæ angustæ utrinque attenuatæ adhærentes.* Stigma *latum transversum infra antheram margine superiore emarginatum pro glandulæ receptione.* Lindley MSS.

Our plant flowered late last autumn in the hothouse at Wormleybury, having been newly introduced by Sir Abraham Hume, as believed, from China. The sample obligingly sent us for the use of this work, was requested by Mr. Lindley, who offering us his notes concerning it, we took none ourselves. Nor have we had any opportunity of comparing it with *ensifolium*, to which it appears the nearest; but as far as recollection serves us in regard to our plant, it differs from that in having a fleshy rigid regularly tapered prominently nerved subcartilaginously edged crenulated pale green foliage. The flowers are of a yellowish green throughout, and the label unspotted. Further differences may offer when samples of the two shall have been compared. We have not much hesitation however in separating them, although not confident. The leaves remind us of those of IRIS *Xiphium*.

According to Baron Humboldt, the shady vallies of the Andes of Mexico, New Granada, Quito, and Peru, situated between the elevations of 800 and 1100 fathoms, where refreshing breezes and vernal warmth prevail the year through, are rivalled by no part of the globe in the number of the species, the beauty and fragrance of the blossom, as well as the fullness and brilliancy of the foliage of their *Orchideæ*. He calculates that not a twentieth part of the species belonging to those regions have been observed by the botanist; and remarks, that while the whole of Europe affords about 70 or 80, the tropical portion of America alone, although yet so cursorily explored in its mountainous districts, has presented us with 244, of which 61 were discovered by himself and M. Bonpland.

Scarcely any of the species with a spurred label are found in tropical regions, that section of their type belonging principally to the temperate and frigid zones. ORCHIS, HABENARIA, CYPRIPEDIUM, OPHRYS, SERAPIAS, EPIPACTIS, &c. &c. are the prevailing groups in our northern hemisphere*; SATYRIUM, PTERYGODIUM, DISPERIS, CORYCIUM, DISA, PTEROSTYLIS, CALADENIA, &c. &c. of the southern.

The equatorial *Orchideæ* are principally of the Epidendrous section, and differ from their coordinates of the temperate zones in being gregarious and parasitical.

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* Excellent and accurate figures of several of these genera, so rare in our collections, may be seen in "THE JOURNAL OF SCIENCE AND THE ARTS."

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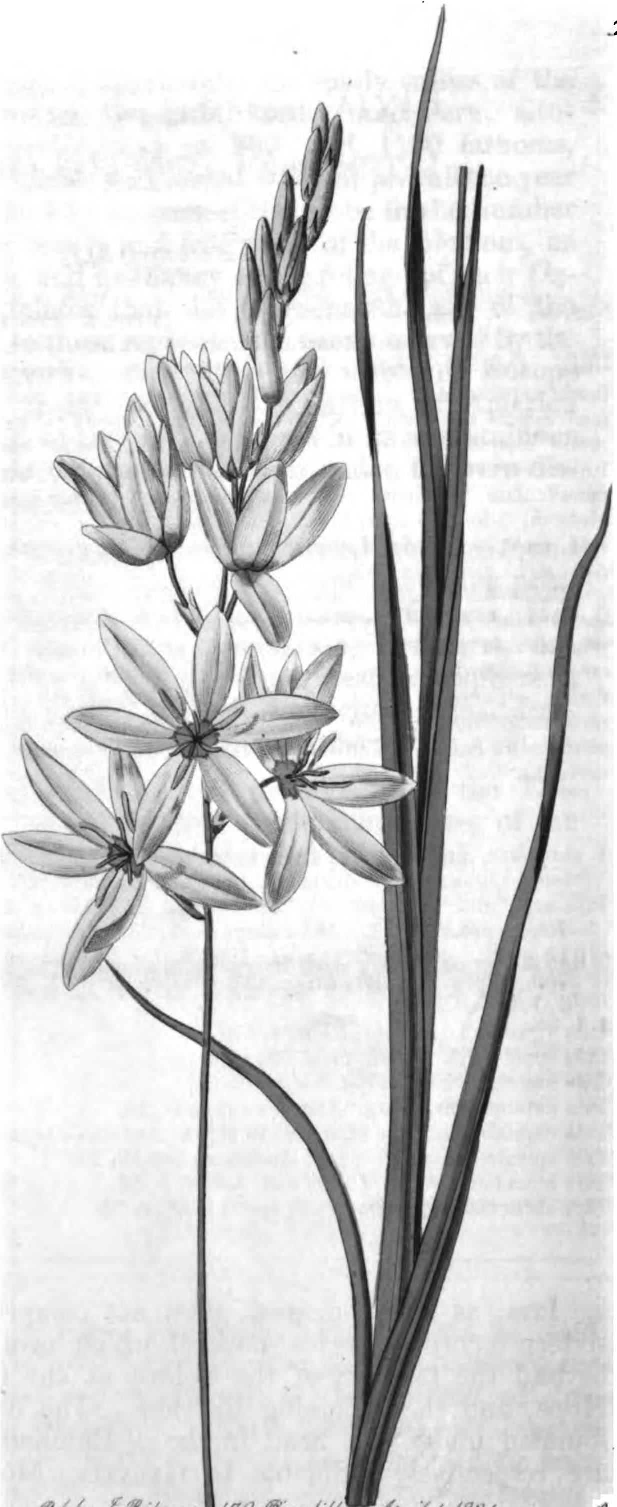

Syd. Edwards. del. Pub by J. Ridgway 170 Piccadilly April 1. 1821. S. Watts sc.

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IXIA maculata; *var. cæsia.*

Green-spotted french-grey Ixia.

TRIANDRIA *MONOGYNIA.*

Nat. ord. Ensatæ. *Lin. ord. nat. VI. Nobis in ann. of bot.* 1. 219. Irides. *Jussieu gen.* 57. Irideæ. *Brown prod.* 1. 302.

IXIA. *Spathæ* distinctæ, bivalves, unifloræ, plurimùm breviores corollâ. *Cor.* hypocrateriformis, erecta; *tubo* angusto, cylindraceo, recto, fauce sæpiùs nullâ; *limbo* regulari, 6-partito, rotato, laciniis oblongis, rarissimè infernè conniventibus. *Stam.* breviora limbo; *fil.* summo tubo inserta, modò monadelpha: *anth.* erectæ, introrsæ. *Stylus* erectus, tubum liberè trajiciens; *stig.* 3, tubo exserta, lineari-laminata, angusta, complicato-canaliculata, replicata, sæpissimè indivisa. *Caps.* membranacea, ovato-globosa, 3-loc., 3-valv. loculamentis polyspermis, valvis medio septigeris; *sem.* margini intimæ septorum utrinque annexa, globosa, Sinapeos minora; *testâ siccâ* membranaceâ.

Bulbo-tuber *castaneo-carnosum, soboliferum, tunicis persistentibus fibroso-membranaceis aridis (rarò stupaceo-retextis) concentricis tectum, omni anno post enixum simile floridum emoriens, ut in* Croco. Folia *ensata, collaterali-disticha, nervosa, plana, infernè equitanti-complexa, vaginâ radicali.* Caulis *culmaceus,* spicâ *alternâ multiflorâ laxâ, rarissimè flore solitario, terminatus, nunc ramosus, foliis interioribus* 2 *sæpiùs vaginatus.* Infloresc. *omni colore ludens.* Corolla *teneriuscula, limbo sesquiunciam diametro rarò excedens.*

I. *maculata,* corollæ tubo capillari, limbo explanato basi maculato; stigmatibus ad tubum usque distinctis, infrà antherarum bases replicatis.

Ixia maculata. *Lin. syst. veg. ed.* 14. 85. *Thunb. ix.* 19. *ejusd. prod.* 10. *Burm. prod. cap.* 1. *Schneevogt ic.* 6. 25. *Jacq. hort. schœnb.* 1. 9. *t.* 19—23. *Andrews's reposit.* 196, 256. *Nob. in curtis's magaz.* 549, 789, 1285. *Redouté liliac.* 137. *Willd. sp. pl.* 1. 205. *Hort. Kew. ed.* 2. 1. 88.
Ixia viridiflora. *Redouté liliac. t.* 476.
Ixia spectabilis. *Salisb. prod.* 33. *n.* 10.
Ixia amœna. *Salisb. prod.* 35. *n.* 12.
Ixia capitata var. ovata. *Andrews's reposit.* 23.
Ixia capitata var. flore albo, fundo nigro. *Andrews's reposit.* 159.
Ixia spicata var. viridi-nigra. *Andrews's reposit.* 29.
Ixia maculata viridis. *Usteri ann. bot. st.* 5. 58.
Ixia abbreviata. *Houttuyn pfl. syst.* 11. 48. *t.* 78.

Ixia, as above defined, does not comprize more than sixteen recorded species, none of which have been observed beyond the territory of the Colony at the Cape of Good Hope, and the adjoining districts. The 59 species confounded under this head in the "Enumeratio" of Vahl, are respectively reducible to Galaxia, Moræa, Tricho-

nema, Geissorhiza, Ixia, Sparaxis, Tritonia, Lapeyrousia, Hesperantha, Anomatheca, Watsonia, and Babiana, genera, in our apprehension, as expedient and mutually as distinct in character and habit as the confining generic groups of any of the orders of the Monocotyledonous division of Vegetables.

The drawing is from a plant which flowered about four years ago in Mr. Griffin's conservatory at South Lambeth, and had been received from the Cape of Good Hope. It is a variety that we have not before met with in our collections.

Maculata, curiously variable in the colour of the flower, displays itself in every hue and shade, not excepting the most beautiful greens, and even black, colours so rare in the corolla of other vegetables. As a species, we confess, we can find no other line of demarcation between it and *erecta*, variable in the same way and to the same extent, but the circular spot in the centre of the limb of the first, which is not in the latter, nor should we have separated the two had we not found them established by former botanists of eminence.

The nucleus or bud of the bulb-tuber of this genus, like that of Crocus, resembles in substance the kernel of a chestnut, and dies yearly away concealed within its dry fibro-membranous permanent coats, while evolving another which is to bear the flower of the season. In Watsonia the bulb-tuber, which perishes, is the one that has itself borne the flower of the season, the scape of which is transmitted between two principal buds, evolved during its growth, and which do not flower until the ensuing season.

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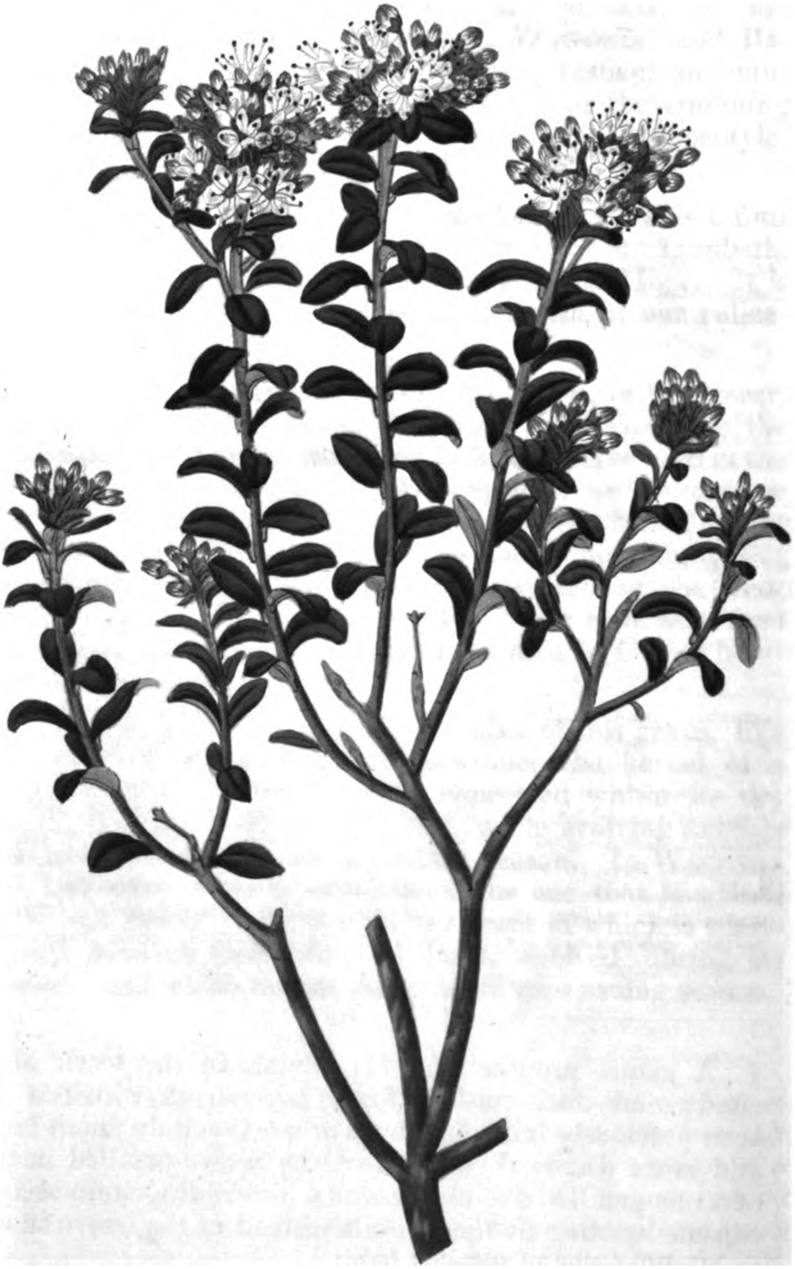

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AMMYRSINE buxifolia.

Sand-myrtle.

DECANDRIA *MONOGYNIA.*

Nat. ord. RHODODENDRA (RHODORACEÆ). *Jussieu gen.* 158. *Div. II.* Corolla subpolypetala.

AMMYRSINE. Cal. profundè 5-partitus. *Pet.* 5. *Stamina* exserta. *Caps.* 5-locularis, apice dehiscens. *Pursh amer. sept.* 1. 280.

Ammyrsine *buxifolia.* Pursh amer. sept. 1. 301.
Ledum buxifolium. *Hort. Kew.* 2. 65. *ed.* 2. 3. 48. *Bergius in act. petrop.* 1777. *part.* 1. 213. *t.* 3. *fig.* 2. *Willd. sp. pl.* 2. 602. *Michaux bor. amer.* 1. 260. *Nuttall gen.* 1. 275.
Ledum thymifolium. *Lamarck encyc.* 3. 459. *illustr. t.* 363. *fig.* 2.
Ledum (Leiophyllum) thymifolium. *Persoon syst.* 1. 477.

Frutex *parvus, vix pedalis.* Caulis *erectus, teretiusculus, cicatricibus scaber, cinerascens, determinatè ramosus:* rami *ad interstitia stata, subverticillati foliosi v. cicatrizati; singuli paritèr ramulosi, erecti.* Folia BUXI, *sparsa, frequentia, brevitèr petiolata, ovalia, obtusa,* 2 *v.* 3 *lineas longa, supernè subrugosa, subtùs lævia punctata, utrinque nitida, margine undique reclinato.* Corymbi *florum terminales simplices,* pedunculis *unifloris pubescentibus:* bracteæ *oblongæ, obtusæ, subimbricatæ, patentes, receptaculo proprio sitæ undè pedunculi exeunt.* Cal. *monophyllus glaber basi intrusá, 5-angulus, 5-partitus, laciniis lanceolatis acutis erectis.* Cor. *alba;* pet. 5 *ovata, obtusa, calyce longiora, sessilia, patentia.* Fil. *subulata, corollá longiora, erecto-patentia, alba.* Anth. *purpureæ, ovatæ, parvæ, hìnc planiusculæ, indè didymæ, bisulcatæ, incumbenti-erectæ.* Germ. *superum, subrotundum, undique sulcatum, scabridum.* Stylus *cylindricus, erectus, longitudine staminum:* stigma *simplex, subemarginatum truncatum.* Caps. *ovata, acuta, subrugosa, 3-loc., 3-valv., valvulis latere interiore longitudinalitèr dehiscentibus:* sem. *plurima, parva, ovata, scobe interstincta.* Bergius loc. cit.

A genus proposed by Mr. Pursh in the work above cited; and distinguished from LEDUM, in which it had been previously included, by a proportionately much larger and more deeply divided calyx, by a five-petalled instead of a one-petalled five-cleft corolla, protruding stamens, and capsule opening at the summit instead of the base; as well as by difference of general habit.

Buxifolia, the only recorded species, is known by the name of *Sand-myrtle* in the state of New Jersey, where it grows in Pine barrens. It is also said to be native of the mountains of Carolina.

Introduced by Mr. Peter Collinson in 1736. Flowers with us in April and May. Drawn at the nursery of Messrs. Colvill in the King's Road, Chelsea, where it is cultivated in peat-mould; and usually kept in pots, and sheltered under the lights of a garden-pit in the winter.

A small upright bush, seldom exceeding a foot in height; *branches* round leafy subdivided. *Leaves*, compared by some with those of the Box-tree, by others with those of Thyme, scattered, closish, shortly petioled, oval, obtuse, 2-3 lines long, shining on both sides, paler underneath, reflexed at the edge. *Corymbs* terminal, subcapitate, simple; *pedicles* one-flowered, minutely pubescent, placed on a short *peduncle* beset by smooth green oblong obtuse subimbricate spreading scalelike *bractes* placed separately at the foot of each pedicle. *Calyx* green, sometimes tinged with red, five-parted, smooth, dinted underneath, segments upright, lanceolate. *Corolla* white, sometimes slightly tinged with red on the outside; *petals* ovate, obtuse, longer than the calyx, sessile (that is, without *unguis* or *petal-foot)*, spreading. *Filaments* subulate, longer than the corolla, white, uprightly spreading: *anthers* purple, ovate, small, incumbently upright, twin. *Style* cylindrical, the length of the stamens; *stigma* a simple depressedly blunted point. *Capsule* ovate pointed, somewhat wrinkled; the valves opening longitudinally on the inner-side. *Seeds* many, small, ovate.

We have borrowed the description from the excellent ones respectively given by Messrs. Bergius and De Lamarck.

the tribe where the present genus stands, and the most extensive except *Heliantheæ*, resolves into his sections *Inuleæ-bupthalmeæ*, *Inuleæ-prototypeæ*, and *Inuleæ-gnaphalieæ;* the *first* denoted by a nonscariose calyx, anthers unappendanted at the base, and round-topped stigmas; the *second* by a nonscariose calyx, anthers appendanted at the base, and round-topped stigmas; the *third* by a calyx scariose throughout, anthers appendanted at the base, and truncated or flat-pointed stigmas.

The enumeration of the genera composing the foregoing tribes is announced for the head *Inuleæ* of the next ensuing part of the "Dictionnaire des Sciences Naturelles," a work in course of publication in France, and by the article *Gnaphalieæ* of which we have been supplied with the above information.

We cannot but regret to find in the instructive article, from which we have borrowed so freely, the peevish cavil applied by M. Cassini, in the place of criticism, to a definition proposed by Mr. Brown for GNAPHALIUM; which very definition is, after all, adopted upon the spot without amendment or addition, except the insertion of points already expressed in the character of the order, and consequently supererogatory in that of the genus. Can it be, that that ingenious botanist has been affronted by the sagacity with which he has been more than once successfully anticipated from the same quarter?

We shall here insert some observations by Mr. Brown upon a proposed reform of GNAPHALIUM.

"This extensive and ill-defined genus evidently requires reformation; and if the necessity for its subdivision be admitted, it will also, I believe, be found most expedient to apply the name GNAPHALIUM to that section to which G. *luteo-album*, *sylvaticum*, and *uliginosum* belong, and which is characterized by its naked *receptacle*, its *involucrum (calyx)* connivent at top and of equal height with the truncated *capitulum (syngenesious flower)*, which consists of numerous filiform pistilbearing florets in the circumference, with a smaller number of stamen and pistilbearing florets in the disk, both of them ripening seeds, and having a sessile capillary deciduous *pappus (seedcrown)*."

"ANTENNARIA is a genus separated from GNAPHALIUM by

Gærtner, but which, as he has proposed it, consists of three tribes of plants sufficiently dissimilar in habit and structure to justify a further subdivision; and, what is remarkable, none of them entirely agreeing with his generic character."

"The first tribe consists of herbaceous plants, natives of Europe and North America, having the staminiferous florets and the pistilliferous florets in distinct *involucra*, and on different individuals. To this genus the name ANTENNARIA* may remain, though descriptive of the pappus of the staminiferous flower only. Its species are GNAPHALIUM *dioicum* Linn., *alpinum* L., *carpaticum* Wahlenberg, *plantagineum* L., and *margaritaceum* L."

"The second tribe consisting of GNAPHALIUM *Leontopodium* and *leontopodioides*, which may be called LEONTOPODIUM, is in affinity between ANTENNARIA and GNAPHALIUM as here limited, but has sufficient characters to distinguish it from both."

"The third tribe has been found only in South Africa, and consists of shrubs with rigid heath-like leaves, of which the margins are incurved, the upper surface tomentose, and the under convex and nearly smooth; but by a remarkable twisting they are in most of the species resupinate; a character which seems to have been overlooked in all the described species; namely, GNAPHALIUM *muricatum*, *mucronatum*, and *seriphioides*. In this tribe, or genus, which may be named METALASIA, the *involucrum* is generally cylindrical, and in most species has a short *radius (ray)* formed by the spreading coloured laminæ of the inner scales (leaflets); the *flosculi* are few in number, and all both stamen and pistil-bearing; and the radii of the pappus, which fall off separately, are either thickened or more strongly toothed at top." *Brown on the Compositæ in trans. lin. soc.*

ASTELMA is now first detached from GNAPHALIUM by the above able hand; and founded upon the present species, characterized as a genus by a naked *receptacle of the flower* (neither chaffy nor honeycombed); a sessile feathered *seed-crown*, the radii of which are connected at the base; an imbricated *calyx*, composed of scariose *leaflets*, the innermost of which are convergent, and which florets are all both stamen-bearing and pistil-bearing. It is the nearest genus to ELICHRYSUM; from the genuine species of which, according to Mr. Brown, it only differs by the rayless calyx.

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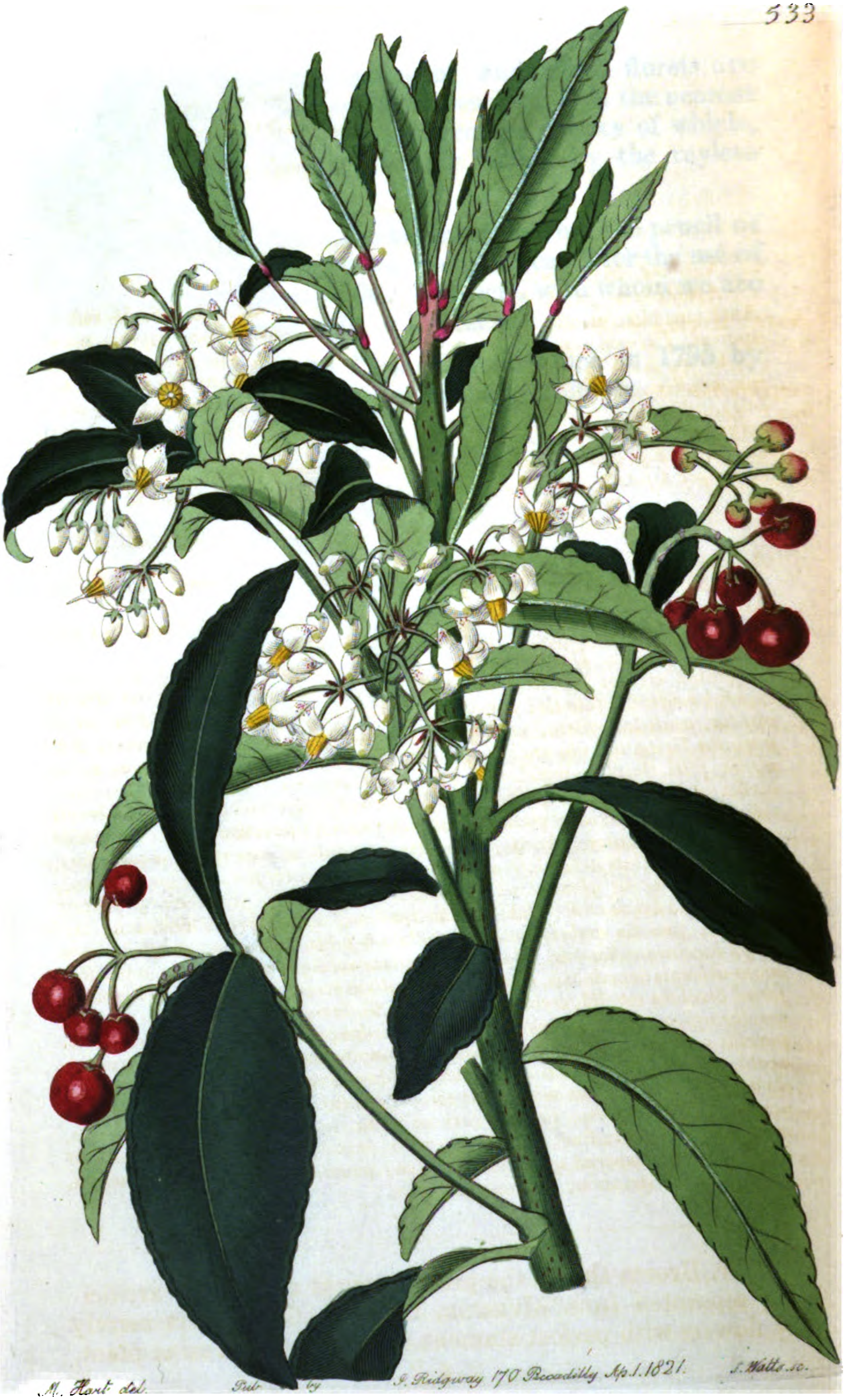
* Fully defined by Mr. Brown in a note in the page from which we are extracting.

The drawing of this splendid shrub is from the pencil of Mr. Ferdinand Bauer; and was communicated for the use of this work by its possessor, Mr. Lambert, with whom we are always incurring some debt of kindness.

Introduced from the Cape of Good Hope in 1793 by Col. Will. Patterson. Belongs to the greenhouse.



M. Hart del. Pub by J. Ridgway 170 Piccadilly Ap 1. 1821. J. Watts sc.

ARDISIA lentiginosa.

Speckle-flowered Ardisia.

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PENTANDRIA *MONOGYNIA.*

Nat. ord. MYRSINEÆ. *Brown prod.* 1. 532.

ARDISIA. *Cal.* 5-partitus. *Cor.* hypocrateriformis: *limbo* reflexo. *Anth.* magnæ, erectæ. *Stigma* simplex. *Drupa* carnosa, supera, monosperma. *Persoon syn.* 1. 233. Frutices v. arbusculæ. *Fol.* alterna coriacea.

OBS. ARDISIA MYRSINI *nimìs affinis, diversa solummodò* floribus *hermaphroditis,* stigmate *simplici,* ovario *indefinitè polyspermo (ovulis 5-pluribus),* antheris *conniventibus.* BLADHIA *ab utroque genere foliis oppositis ternisve diversa, fructificatione totâ similis.* WALLENIA *quæ hujus ordinis, et dioica, à præcedentibus differt, corollâ longiùs tubulosâ, limbo abbreviato et semper 4-fido. An itaque omnia conjungenda?* Brown prod. 533.

A. *lentiginosa,* foliis lanceolatis, crenatis; corymbis compositis; floribus minutè lentiginosis.

Ardisia crenata. *Curtis's magaz.* 1950; *(non Carey hort. beng.* 85.) *quæ fortè* ARDISIA elegans. *Andrews's reposit.* 623?

Ardisia crenulata. *Donn cant. ed.* 8. 64 *(non Ventenat choix. tab.* 5.)

Frutex *erectus ramulis numerosis approximatis undique sparsis strictis supernè confertìm foliosis; novellis crassiusculis.* Fol. *sparsa, coriacea, atroviridia, ovali-lanceolata, utrinque attenuata, margine reflexo-crenata,* 2-3-*uncialia latitudine vix unciali;* petiolus *brevis canaliculatus unà cum nervo medio folii lineolato-punctatus.* Corymbi *compositi ramulorum terminales, laxiùs multiflori, cernui, divaricati, breviores foliis:* rachis communis *brevis robustus strictus viridis;* pedunculi *undìque sparsi plurimùm longiores rachide strictiusculi virides punctis lineolatis glandulosis aspersi, uni-pluriflori,* pedicelli *umbellati articulato-annexi, parùm longiores flore.* Flores *cernui, albicantes lineolis glandulosis rufescentibus punctati, diametro* $\frac{1}{3}$ *partem unciæ vix adæquantes.* Cal. *corollæ concolor,* 4*plo brevior, carnosula, accumbens, punctis crebris notatus, stellato-5-fidus, persistens et sensìm cum drupâ coccineo-rubescens.* Cor. *campanulato-rotata 6-partita,* lac. *æqualibus ovato-oblongis acuminatis, concaviusculis, disco brevissimè connexis.* Stam. *bìs fermè breviora corollâ, erecto-conniventia;* fil. *brevissima robusta imo margini corollæ affixa;* anth. *magnæ luteæ sagittato-lanceolatæ posticè lineolis badiis parciùs punctatæ, à basi infixæ, utrinque longitudinalitèr dehiscentes, apiculo acuto.* Germ. *punctatum viride subrotundo-cylindraceum,* ovulis *subtrinis?,* stylus *setaceus virescens subæqualis corollæ erectus persistens,* stigma *apiculus acutus.* Drupa *cortice tenuiùs carnoso tecta, impunctata, coccinea, lævis, subglobosa, magnitudine Pisi mediocris v. minor, stylo infernè carnoso at longiùs à parte supernâ sphacelato præfixa;* putamen *fuscescens, crustaceum, tenue, pallido-striatum;* albumen *corneum.*

Mr. Brown thinks the present genus almost too artificially separated from MYRSINE, from which it differs merely by flowers with perfect stamens and pistil on the same plant,

instead of being dioicous and bearing the perfect stamens alone in the flowers of one plant and perfect pistil in those of another, by a simple stigma, an indefinitely seeded germen (with 5 ovula or more), and collective anthers; and doubts whether the two might not be conveniently united both with BLADHIA, which agrees in character of flower and fruit, though it differs by the leaves being in pairs or threes, and with WALLENIA, a dioicous coordinate, differing from the other three by a corolla with a proportionately longer tube and shallow constantly four-cloven limb.

ARDISIA *lentiginosa* is said to have been introduced from China about the year 1810, by the late Mr. Evans of Stepney. The drawing was taken at Messrs. Colvill's nursery in the King's Road, Chelsea.

ARDISIA *crenata* of Roxburgh's manuscripts and Carey's Hortus Bengalensis, is an East Indian species with red flowers, and, we have little doubt, the same with ARDISIA *elegans* of Andrews's Botanist's Repository (t. 630). ARDISIA *crenulata* of Ventenat is a West Indian species, very distinct from the present, which has a white flower with numerous glandular russet specks, indistinctly visible to the naked eye in the corolla, but thicker and more conspicuous in the calyx. The young branches are thick but pliant, and remind us in some measure of those of the well-known AUCUBA *japonica*. In the hothouse, where our shrub is usually cultivated, it is generally seen with masses of bloom on one part and coral-coloured fruit on another, making a very ornamental object for this department of the garden.

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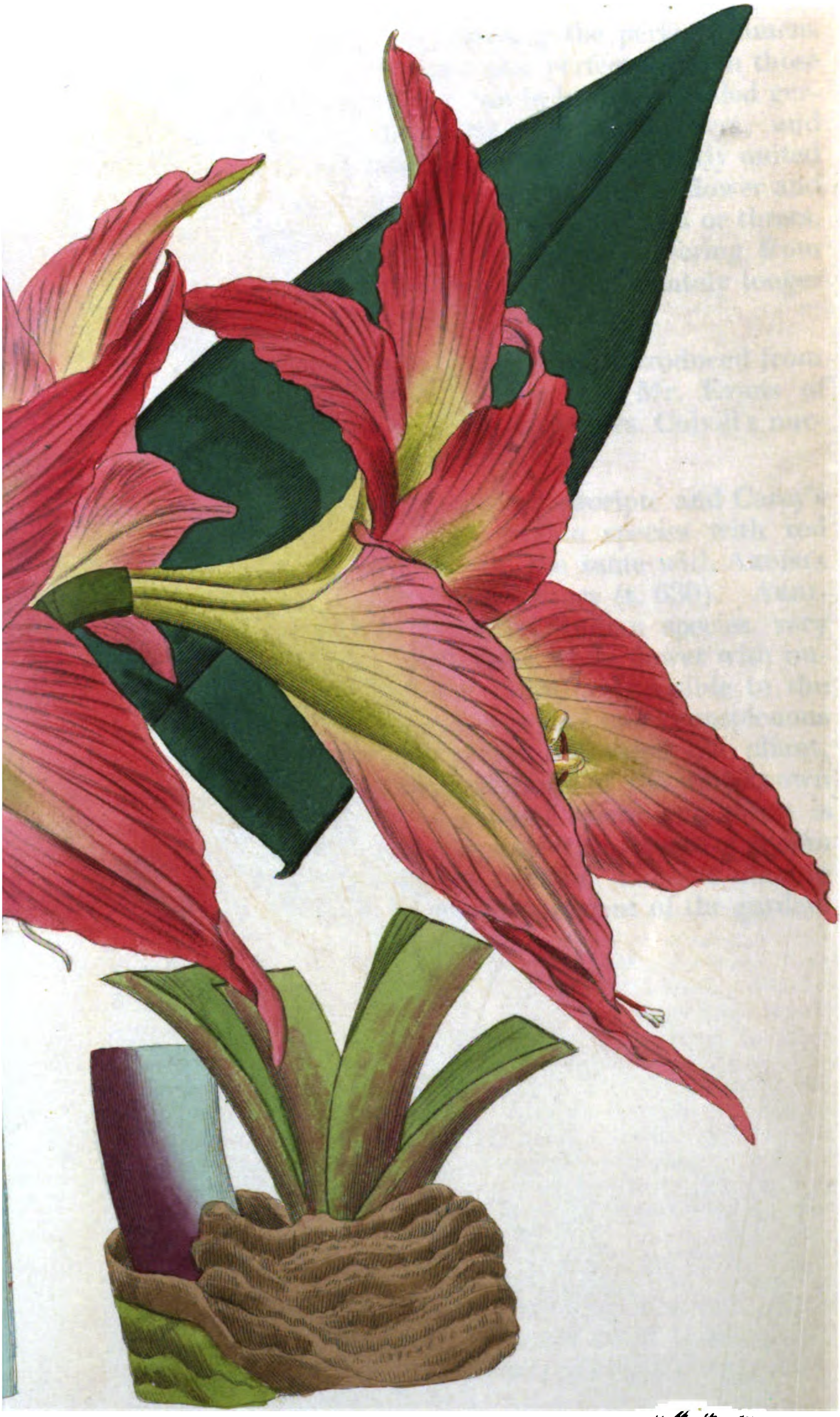

April 1. 1821.

J. Watts sc.

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AMARYLLIS acuminata.

Buenos Ayres Amaryllis.

HEXANDRIA *MONOGYNIA.*

Nat. ord. NARCISSI. *Jussieu gen.* 54. *Div. II.*
AMARYLLIDEÆ. *Brown prod.* 1. 206. *Sect. I.*
AMARYLLIS. Suprà vol. 3. *fol.* 226; *ubì in seminum* characteré *post* " globosa" *inseri potest* " modòque baccata."

Div. Bi-multifloræ; tubo nudo; foliis bifariis.

A. *acuminata,* pluri (4)-flora; foliis lorato-elongatis, supra pulvisculo cano opacatis; germine subæquante tubum; corollæ ringentis laciniis 3 summis rhombeo-lanceolatis, acuminum productorum lateribus rectis undulatis.

Bulbus *subrotundus magnitudine ferè ovi anserini, tunicis fuscis.* Fol. *plura, subcoriaceo-firma, lato-ligulata, sesquipedalia ultràve latitudine subtriunciali, suprà nimbum tenuem canum virore subobscuro translucentia, brevitèr acuminata, infrà pallidiora nitida.* Scapus *cylindraceus, robustus, glaucus, sesquipedalis, basi purpurascens.* Flores *nutantes, miniato-micantes, 5-unciales, subtessellato-maculosi:* pedunculi *obtusè trigoni, stricti, subunciales.* Germ. *viride, oblongum rotundatè trigonum;* ovula *numerosa biseriato-cumulata plano-compressa.* Corollæ tubus *intaminatus, semuncialis;* faux *stellâ notata* fulgidæ *congeneris proximioris viridiore, turbinata: cætera ferè* fulgidæ *suprà vol.* 3. *tab.* 226. *videndæ.*

This fine plant flowered in January last at South Lambeth, the bulb having been obtained by Mr. Griffin, directly from Buenos Ayres; and cultivated in the bark-bed of his hothouse. It belongs, as well as we can judge, to an unrecorded species, and ranks in the same section of the genus with *fulgida* and *crocata,* previously introduced by Mr. Griffin, and already published in this work; from both of which, however, though very nearly akin, it differs markedly, by a greyishly clouded foliage, and by the 3 upper segments of the corolla being of a rhomboidally lanceolate form, and long-pointed with straightly edged curled sides tapering all the way from near the middle. The leaves are much longer and of a darker green than those of *fulgida,* the corolla faintly chequered and of a pinker or paler salmon-red.

Bulb as large as a goose's egg with brown integuments. *Leaves* thickish and firm, lorate (broadly linear), shortly pointed, a foot and a half long, and in the present sample nearly 3 inches broad, of a darkish green, clouded by a powdery bloom which overspreads the upper side, shining and paler on the under side. *Scape* about $1\frac{1}{2}$ foot high, cylindrical, glaucous, purple at the base. *Umbel* of 4 nodding flowers, about 5 inches long; *peduncles* upright, robust, about an inch long, bluntly 3-cornered. *Germen* green, oblong, with three rounded corners; *ovula* numerous, in two rows in every cell, flattishly compressed, horizontally piled. *Tube* of the corolla about half an inch long, unspotted: *faux* with a greener star than in *fulgida,* with which the species agrees pretty closely in other parts of the corolla.

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NOTE.

While defining some of the genera in *Amaryllideæ,* speaking of the bulbispermous capsule, which is incidental to several, for the sake of a term in description, we presumed the curious enlargement of its seed to be a modification of the albumen; but Mr. Brown has long since applied himself to the investigation of this point, and though with that laudable caution and precision with which he accompanies all scientific communications, he yet hesitates to decide absolutely on its nature and origin, he is however convinced from the texture of its substance that it can be no modification of the albumen. His view of the structure and parts of a true seed are to be found in the masterly description given in the character of GRIFFINIA in the present volume.

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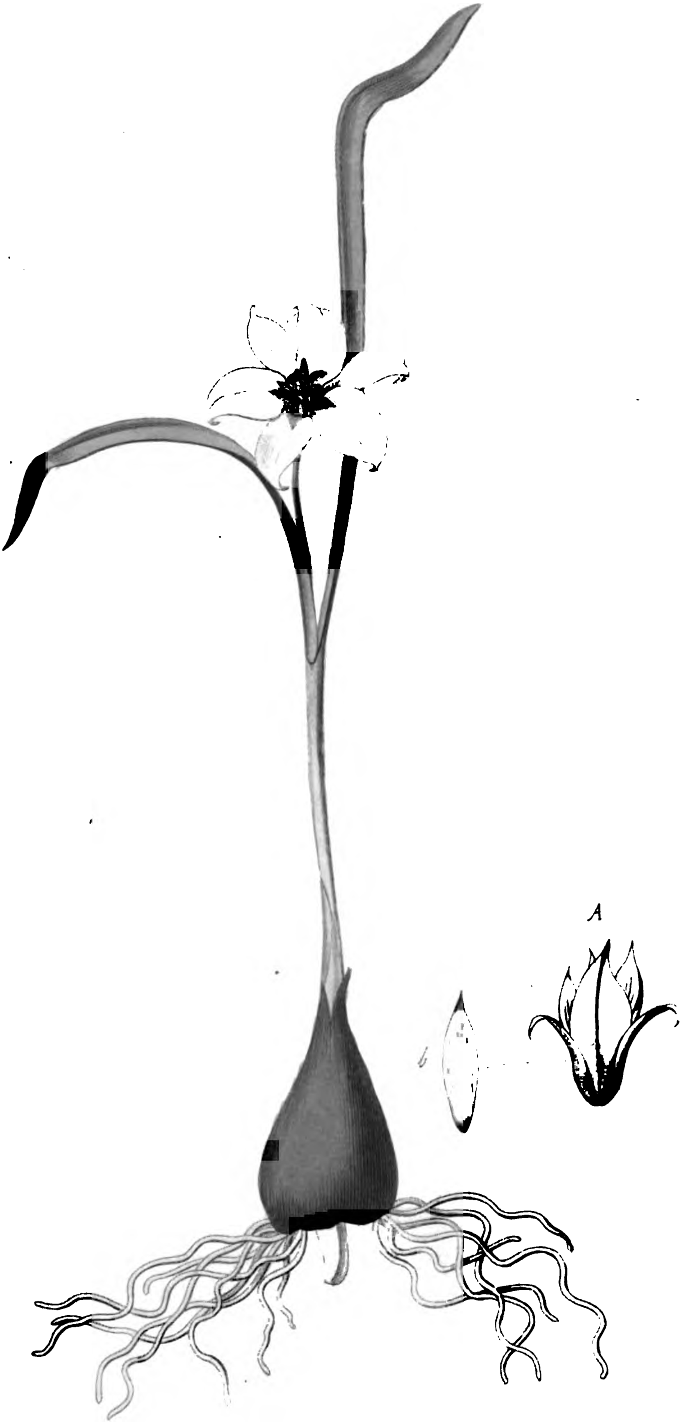

M. Hart. del.   Pub by J. Ridgway 170 Piccadilly May. 1. 1821.   J. Watts. sc.

TULIPA biflora.

Calmuc Tulip.

HEXANDRIA *MONOGYNIA (TRIGYNIA).*

Nat. ord. LILIA. *Jussieu gen.* 40.
MELANTHACEÆ. *Brown prod.* 1. 274.
TULIPA *Suprà vol.* 3. *fol.* 204.

T. *biflora*, bifolia; foliis linearibus intùs glaucis, caule bi-(1-4-)floro glabro, corolla ante anthesin mutante, petalis staminibusque basi barbatis, pistillo acutè prismatico, stigmatum orà canaliculoque inconspicuis: capsulâ trilobo-globosâ mucrone simplici præfixâ.

Tulipa biflora. *Lin. suppl.* 106. *Pall. it.* 3. 727. *app. n.* 80. *tab. D. fig.* 3. *Georgi beschr. des russ. reichs.* 4. *part.* 3. 902. *Falk it.* 2. 109. *n.* 400. *t.* 6. *Willd. sp. pl.* 2. 98. *ejusd. enum.* 1. 363. *Marsch. bieb. fl. taur. cauc.* 1. 270.

(β) foliis splendentibus, corolla intùs dilutè carnea antheris nigricantibus.

Tulipæ Byzantinæ genus alterum. (Lalé di duoi fiori). *Clus. hist.* 1. 152. *cum ic.*

Minima generis, Bulbo-tuber *(peractâ fructificatione emoriturum) simile quotannis perpendiculariter demittens: hinc in annosis alta exuviarum persistentium strues caule percurrente catenata.* Fol. *infernè caulina, alterna, convoluto-linearia, acuminata, scapo longiora, extùs nitida, infernè vaginantia.* Caulis *filiformis, palmaris ad spithamæum, simplex vel (pluribus confluentibus?) ramosus, ramis 2-4 unifloris.* Flores *remissiùs suaveolentes, candicantes fundo flavo,* $\frac{2}{3}$ *unciæ v. circà longi, sub anthesi erecti, campanulato-rotati:* petala *apice nuda,* exteriora *oblongo-lanceolata, sessilia, recurviora, extùs colore violaceo dilutè tincta,* interiora *duplo latiora, lanceolato-elliptica, subunguiculata, barbâ exteriorum parciore, striâ viridi externè prominulâ.* Stam. *bis plusve petalis breviora:* fil. *posticè paullulum suprà basin barbata:* anth. *erectæ, flavæ, sagittatæ, filamento bis breviores.* Stigmata *anguli loculorum continui trini terminales replicati intus obsoletè canaliculati, margine pallidâ nec incrassatâ neque undulatâ.* Caps. *mole ferè Cerasi minoris.* Flos. *secundarius (observante Pallas), sæpiùs ob castrata stigmata abortiens; nunc 4-petalus et 4-andrus.*

The most diminutive of the genus, and unknown in our gardens, until, like so many of our rarest as well as finest liliaceous exotics, introduced by Mr. Griffin.

It was received from Moscow along with *celsiana;* being, as well as that, an indigenous associate of *gesneriana* in the wilds of the southern shores of the Caspian Sea and of the banks of the Wolga.

Celsiana (sylvestris; β. minor. *Marsch. bieb.)* has bearded filaments, but beardless petals; *biflora* has both filaments and petals bearded at the base; *sylvestris* petals bearded both at top and bottom: differences respectively accompanied by others in the habit. *Biflora*, it is said, is never found in wet sandy spots, as *celsiana* and *gesneriana* often are, but always in clayey saline places. The bulbs of all are eaten raw by the Calmucs, especially by their children. The bloom of *biflora* is slightly fragrant; and precedes by a few days that of the other two. The stem is generally 2-flowered; but oftener with 1, than either 3 or 4 flowers, which it sometimes has.

All Mr. Griffin's samples were one-flowered. According to Pallas, the secondary flower is generally abortive, having a defective pistil, and occasionally only 4 petals, with the same number of stamens. May not the two- and more-flowered varieties, be the produce of the incidental confluence of as many one-flowered scapes?

Biflora is distinguished among its congeners by never having more than two leaves, and by a globular 3-cornered capsule with a small simple point, as well as by diminutiveness. The corolla is white with a bright yellow base, and all the petals, as well as filaments, more or less bearded at the lower end, the outer three sessile, more spreading, twice narrower than the inner, and faintly tinged with a violet blue on the outside. The bulb-tuber dies when the capsule ripens, after producing another perpendicularly downwards from the base, besides a smaller lateral progeny; hence in old plants deep accumulations of the exuviæ of preceding years are drawn up with the root, strung together by the stem of the year.

The sample which has been drawn for this work, flowered in February last, in the greenhouse at South Lambeth.

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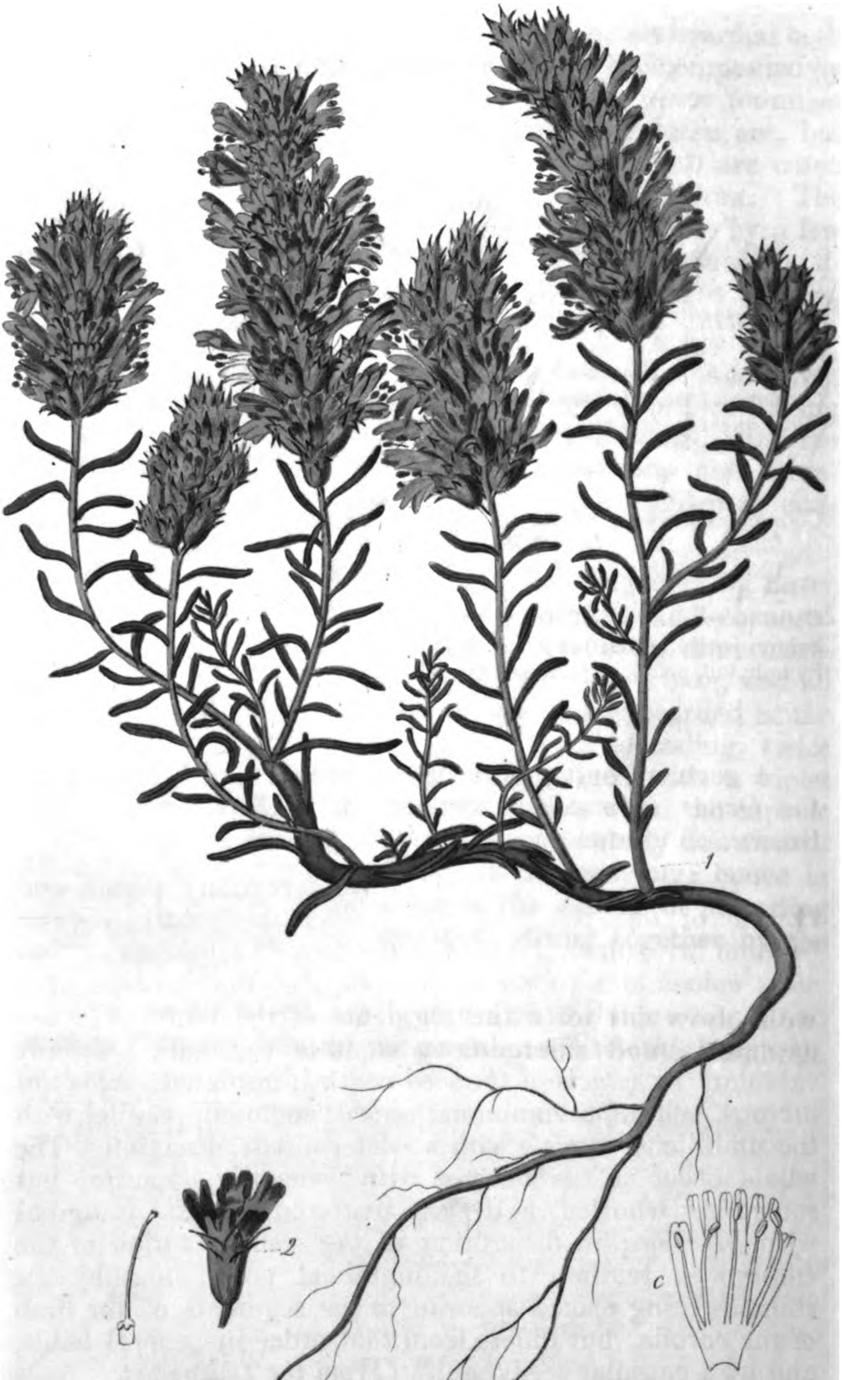

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CORIS monspeliensis.

Coris.

PENTANDRIA *MONOGYNIA.*

Nat. ord. Lysimachiæ. *Jussieu gen.* 95. *Div. I.* Flores cauli insidentes.

Primulaceæ. *Brown prod.* 1. 427.

CORIS. *Cal.* ventricosus, apice 5-dentatus, in ambitû 5-setosus, persistens. *Cor.* (hypogyna) tubulosa 5-fida inæqualis. *Stam.* corollæ laciniis opposita. *Stigma* 1. *Caps.* 5-valvis, calyce tecta: *sem.* numerosa. *Caulis (herbaceus) ramosissimus, humilis, basi sublignosus; folia linearia alterna; flores spicati terminales.* Jussieu gen. 96.

Coris monspeliensis. *Linn. sp. pl. ed.* 2. 1. 252. *Lamarck encyc.* 2. 110. *illustr.* 1. 102. *Lam. & decand. fl. franç.* 3. 437. *Desfont. flor. atl.* 1. 185. *Willd. sp. pl.* 1. 100. *Hort. Kew. ed.* 2. 1. 383. *Curtis's magaz.* 2131.

Coris quorundam. *Clus. hist.* 2. 174; *optimè.*

Simfito petreo. *Cavan. in an. de scienc. nat.* 2. 271.

Symphytum petræum. *Camer. epit.* 699.

A genus of only one recorded species, and belonging to the Order *Primulaceæ*, defined in the Prodromus of Mr. Brown, as follows:

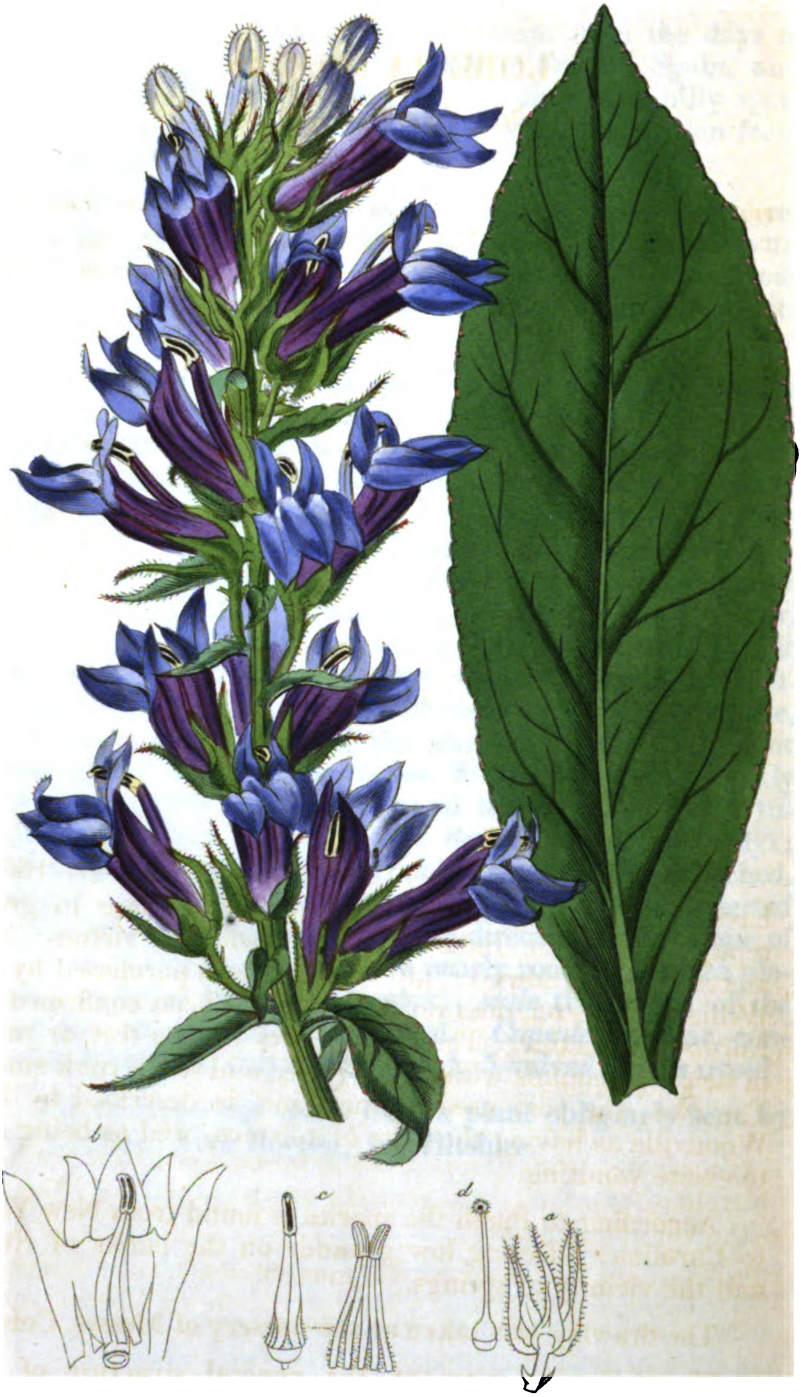
" *Calyx* 5- (seldom 4-) cloven, regular, permanent. *Corolla* of one petal, inferior (under the pistil), regular (seldom irregular), limb of 5 (seldom 4) segments. *Stamens* epipetalous (upon the corolla), of the same number with and opposite to the segments of the limb. *Germen* onecelled: *style* one: *stigma* capitate (headed). *Capsule* valvular: *receptacle* of the seed central, insulated: *seeds* numerous, peltate, albuminous: *embryo* enclosed, parallel with the umbilicus: *radicle* with no determinate direction. The whole order is herbaceous, with generally opposite, but sometimes whorled, and even scattered leaves. It agrees with *Myrsineæ* in disposition of the seed, situation of the embryo in relation to the umbilical point, and by the stamens being placed opposite to the segments of the limb of the corolla, but differs from that order in general habit, and by a capsular seedvessel." *(From the Latin).*

An old, though not common, inhabitant of our flower-gardens, having been cultivated in them from the days of Parkinson. It belongs to the South of France, Spain, and the Coast of Barbary, and is said to affect wild hilly spots near the sea-shore. It requires some slight protection from hard frost in winter.

In the Spanish Annals of Science the dried plant, reduced to powder, is celebrated as a most efficacious vulnerary; chiefly however used, as it appears by the various attestations of its cures, in the pious practice of the late monasteries.

Lamarck speaks of the plant as a dwarfish herbaceous perennial, remarkable for its prickly pointed calyx and heathlike foliage; and describes it with a *rootstock* bearing several *stems*, of a somewhat woody consistence at the base, where they begin to divide into branches, more or less upright, from 5 to 8 inches long, round, ash-coloured or sometimes with a tinge of red, and full-leaved throughout their whole length. *Leaves* numerous, scattered, small, linear, narrow, for the most part entire; the upper ones in the wild plant being however edged with sharp prickly teeth. *Flowers* either of a red or else blueish purple, nearly sessile, and disposed at the top of the stem in close-set heads or ovate spikes. *Calyx* subventricose, five-toothed, with prickly diverging points from the base of the teeth. *Corolla* tubular, irregular, sloping; *tube* the length of the calyx; *limb* 5-parted, segments short, oblong, obtuse, one-notched, uneven; *stamens* but little shorter than the corolla, inserted on the tube, sloping in an opposite direction to the slope of the limb of the corolla; *anthers* nearly round. *Germen* globular, superior (within the calyx); *style* the length of the stamens; *stigma* simple, thickened. *Capsule* globular, concealed within the calyx, one-celled, 5-valved: *seeds* ovoid.

The drawing was made from a plant obligingly sent by Mr. Lambert from Boyton, in Wiltshire.



M. Hart. del.   Pub by J. Ridgway 170 Piccadilly May. 1. 1821.   J. Watts

LOBELIA siphilitica.

Blue American Lobelia.

PENTANDRIA *MONOGYNIA* (v. Monadelphia *Pentandria* v. Syngenesia *Monogamia*).

Nat. ord. Campanulaceæ. *Jussieu gen.* 163. *Div. II.—Brown prod.* 1. 559. *Sect. II.* Cor. irregularis (nunc 5petala). Anth. sæpè connatæ.
Lobeliaceæ. *Jussieu in ann. du mus.* 18. 1.
LOBELIA. *Suprà vol.* 1. *fol.* 60.

L. *siphilitica*, caule erecto, foliis ovato-oblongis utrinque acutis inæqualitèr serratis, floribus axillaribus solitariis, calycum sinubus reflexis pedunculisque hirtis. *Willd. enum.* 1. 217.

Lobelia siphilitica. *Lin. sp. pl. ed.* 2. 2. 1320. *Willd. sp. pl.* 1. 945. *Lamarck encyc.* 3. 586. *Jacq. coll.* 1. 163. *ic. rar.* 3. *t.* 597. *Michaux bor. amer.* 2. 151. *Hort. Kew. ed.* 2. 1. 359. *Pursh amer. sept.* 2. 447. *Nuttall gen.* 2. 75.

Lobelia caule erecto, foliis ovato-lanceolatis crenatis, floribus lateralibus. *Lin. hort. cliff.* 426. *Gron. virg. ed.* 2. 134; *(mutato charactere specifico ex hort. cliff. malè citato adque* Lobeliam erinoidem *referente, exclusisque synonymis cunctis præter Claytoni.)*

Rapunculum siphiliticum. *Gærtn. sem.* 1. 152. *t.* 30. *fig.* 9.

Rapunculum americanum flore dilutè cæruleo. *Dodart. mém.* 105. *Rob. ic.* 264.

A hardy perennial, cultivated as far back as 1665; having been brought from America, where it is in great repute among the Indians for its medicinal virtues; the secret of which however, after having been purchased by Sir William Johnston, does not seem to have been confirmed by European practice. The plant grows to two feet or more in height, abounds with milky juice, and has a rank smell. The root, the part used as medicine, is described by Dr. Woodville as having the taste of tobacco, and as being apt to excite vomiting.

According to Pursh the species is found from New York to Carolina; affecting low grounds on the banks of rivers and the vicinity of springs.

The drawing was taken at the nursery of Messrs. Colvill.

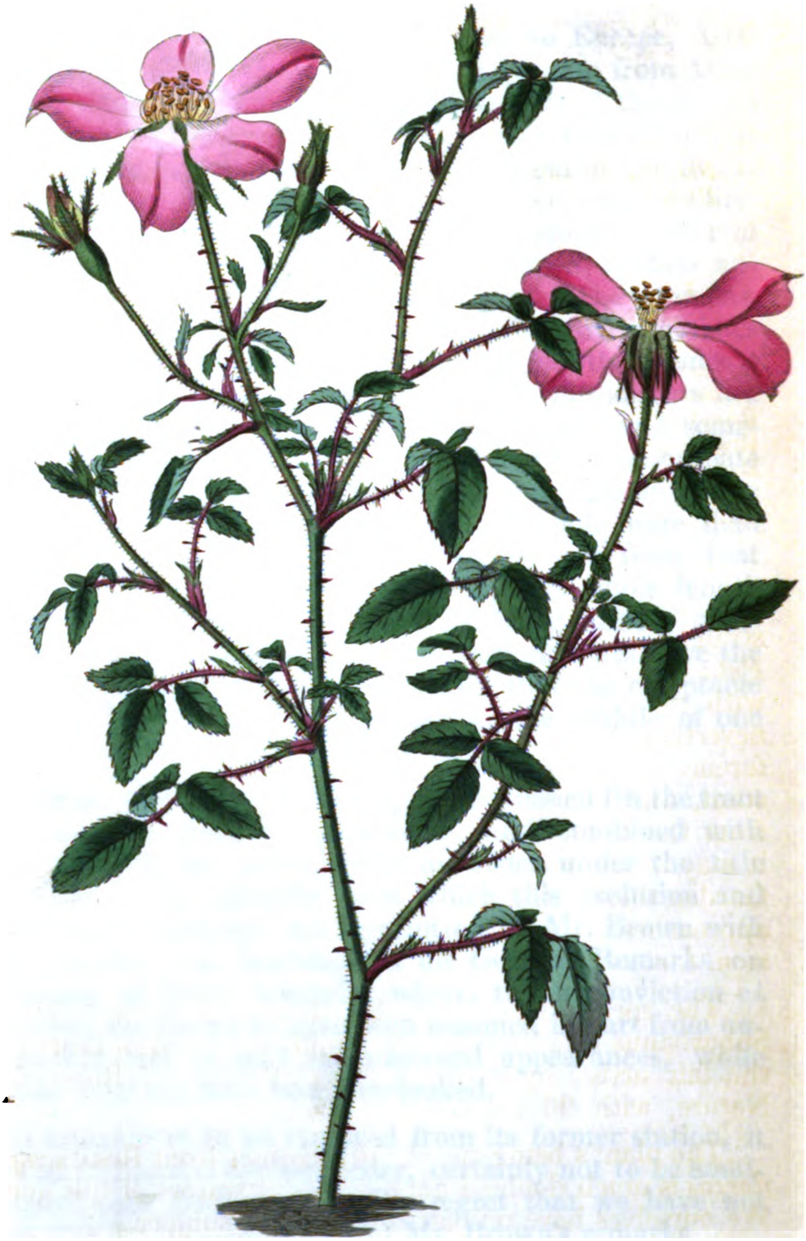
The following view of the general structure of the genus is from a note appended to its technical character in Mr. Brown's Prodromus.

"The corolla of the species belonging to Europe, Asia, and Africa, is either white or blue; but in some from America red. Its tube, which in the greater part of the species is cloven the whole way, is sometimes only divided as far as the middle, and in some few (not distinguished from the rest by any other point of mutual concurrence) quite entire. Its limb is generally two-lipped with a smaller (seldom larger) upper lip, sometimes only one-lipped, seldom approaching to a completely regular form. The stamens, which are usually detached from the corolla, are sometimes attached to it as far as the middle of the tube: the filaments are either quite apart or conjoined above: the anthers are either all bearded, or only the three uppermost, and sometimes none, the two lower ones are now and then mucronate (special pointed). One species is dioicous. Some of the South African suffrutescent ones have a capsule more than half superior; and the only herbaceous one from that quarter has a cylindrical capsule divided its whole length into two valves, notwithstanding its being almost completely inferior. Some of the New Holland ones have the top of the peduncle sloped in such way, that the receptacle of the seed seems as if it originated at the middle of one side." *(From the Latin)*.

Lobelia had been removed by M. de Jussieu (in the tract above quoted) from *Campanulaceæ*, and combined with *Goodenoviæ* of Mr. Brown into an order under the title *Lobeliaceæ*. The affinities upon which this exclusion and recombination proceed, are scrutinized by Mr. Brown with great candour and learning in his General Remarks on the Botany of Terra Australis, where, to our conviction at least, they are shown to have been assumed in part from unsubstantial and in part misconstrued appearances, while genuine relations have been overlooked.

If Lobelia is to be removed from its former station, it must be to found a distinct order, certainly not to be amalgamated with *Goodenoviæ*. We regret that we have not room even for an abridgment of Mr. Brown's remarks.

538.



M. Hart del.   Pub by J. Ridgway 170 Piccadilly May 1. 1821.   J. Watts sc.

ROSA lawranceana.

Miss Lawrance's Rose.

ICOSANDRIA *POLYGYNIA.*

Nat. ord. Rosaceæ. *Jussieu gen.* 334. *Div. II.* Rosæ.
ROSA. *Suprà vol.* 6. *fol.* 458.

Div. IX. Caninæ. *Aculei æquales adunci. Foliola ovata eglandulosa serraturis conniventibus. Foliola calycina decidua. Discus incrassatus faucem claudens. Surculi majorum arcuati.* Lindley monogr. 97.
R. *lawranceana,* nana; foliolis ovatis acutis argutè serratis, petalis acuminatis, ovariis 7-8. *Lindley loc. cit.*
Rosa lawranceana. *Sweet hort. sub. lond.* 119.
Rosa semperflorens; *γ. minima. Curtis's magaz.* 1762.
Rosa pusilla. *Mauritius catal.* 15?

" A very low, compact, little shrub, rarely exceeding a foot in height. The *prickles* are large, stout, and nearly straight. *Leaflets* ovate, acute, flat, very finely toothed. *Petals* small, pale-blush, pointed: *germens* 7-8. Otherwise with the characters of Rosa *semperflorens,* from which I nevertheless have no hesitation in separating it. The difference in number of germens in this division appears constant, and therefore important. Mr. Sweet introduced it from the Mauritius (Isle of France), some years ago, and it may be the Rosa *pusilla* of the Catalogue of the Botanic Garden there. China is probably its native country, as it approaches so very nearly to Rosa *semperflorens.*" *Lind. mon. l. c.*

The species was named by Mr. Sweet in the " Hortus Suburbanus Londinensis" in compliment to Miss Lawrance, the fair artist, by whom " The Collection of Roses from Nature, with 90 plates " was executed.

The plant's being specifically distinct from Rosa *semperflorens* is much doubted among the cultivators of this genus. We ourselves have no opinion upon the subject.

The drawing was made at the nursery of Messrs. Colvill, in the King's Road, Chelsea.

The shrub requires nearly the treatment of the well-known Rosa *semperflorens;* being evidently not so hardy as the favourite Rosa *indica.*

◆

In fol. 532, 2d page of the 2d leaf, line 1, for "and which florets are, &c. &c." read "and the florets within all &c. &c."

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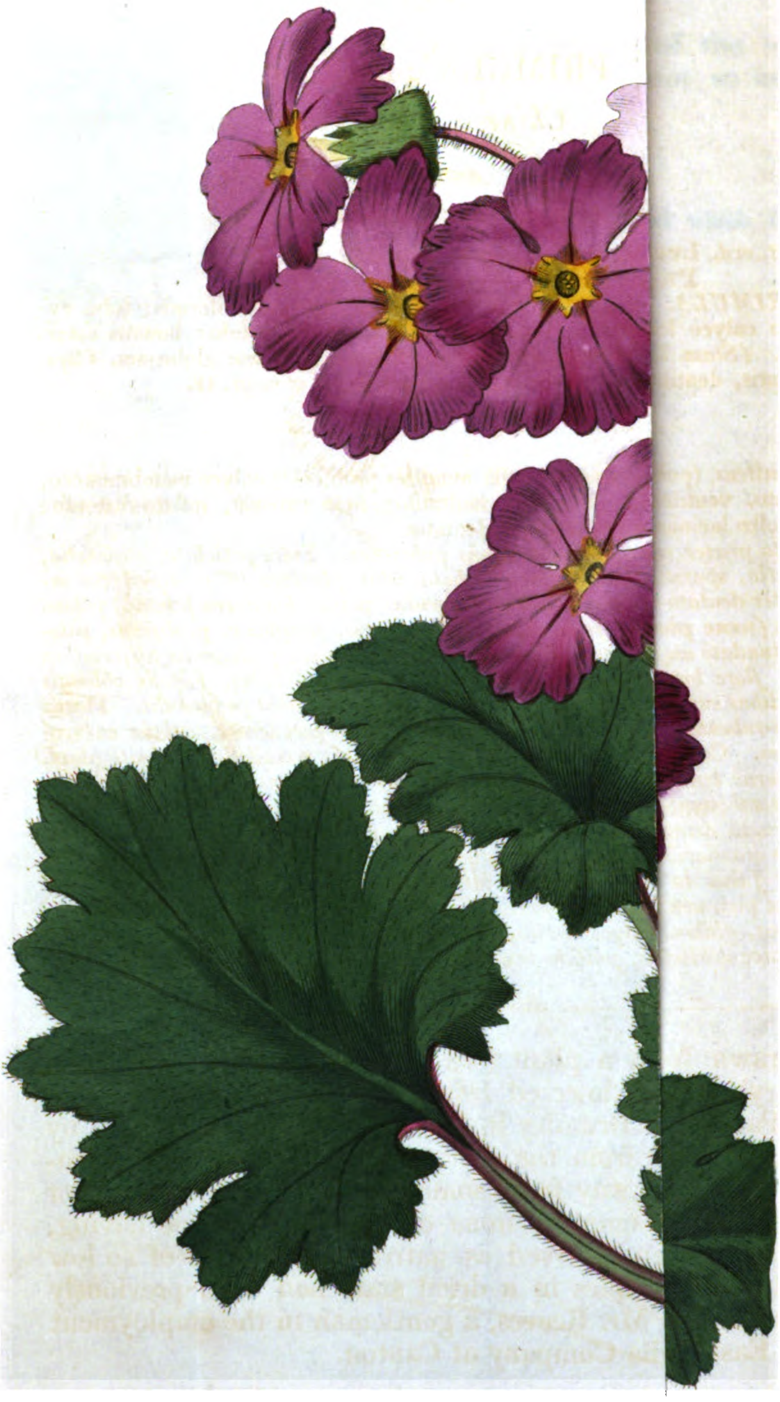

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Pub by J. J. Watts [illegible]

PRIMULA prænitens.

Chinese Primrose.

PENTANDRIA *MONOGYNIA.*

Nat. ord. LYSIMACHIÆ. *Jussieu gen.* 96. *Div. II.*
PRIMULACEÆ. *Brown prod.* 1. 427.

PRIMULA. *Umbella* involucrata. *Cor.* hypocrateriformis; tubo cylindrico calyce longiore: fauce eglandulosâ: limbo 5-fido: laciniis emarginatis. (*Stam.* limbi laciniis opposita. *Brown*). *Stigma* globosum. *Caps.* 1-locularis, dentibus 10-dehiscens. *Lehmann prim. monogr.* 16.

P. *prænitens*, (pubescens, umbellâ nunc bis proliferâ:) calyce membranaceo, ovato, ventricoso, indefinitè multifido; fœto capsulâ, inflato-distento: corollæ laciniis supernè inciso-dentatis.

Tota præter corallam plùs minùs pubescens. Folia *petiolata, radicalia, ambientia, sparsa, lato-cordata, lobata lobis pluribus* (9?) *rotundatis inæqualitèr dentato-incisis, suprà nudiuscula;* petioli *longiores laminâ, pilosi.* Scapus *(nunc plures) folia exsuperans, erectus, simplex v. proliferus, pilosus, rotundatè angulosus.* Umbella *multiflora, laxa, pedunculis filiformibus pilosis, flore longioribus:* involuc. *duplo umbellâ brevius, foliolis oblongis inæqualibus supernè dentato-incisis, interioribus tot quot pedunculis.* Flores *lilacino-rubentes, diametrum sesquiunciale nunc excedentes, subtùs carneopallentes.* Cal. *subvirescens, pilosiusculus, nervis parallelis indefinitè plurimis alternè tenuioribus striatus, corollæ tubum æquans, primùm ovato-ventricosus subanguloso-plicatus (plicis tot quot dentibus), deindè cum increscente fructû extumescens, multifidus lobulis indefinitis acutis tot quot nervis alternis crassioribus, fundo lato planiusculo intruso.* Cor^{æ}. *limbus explanatus maculâ fulvâ in disco, laciniis lato-cordatis, margine superiore dentatis.* Stam. *et* pist. *non licuit inspicere.* Caps. *(nondum benè maturatam vidimus) crustacea, glabra, calyce vestita, oblato-ovata, valvulis* 10 *dentiformibus parvulis apice dehiscens, pallido-fusca.*

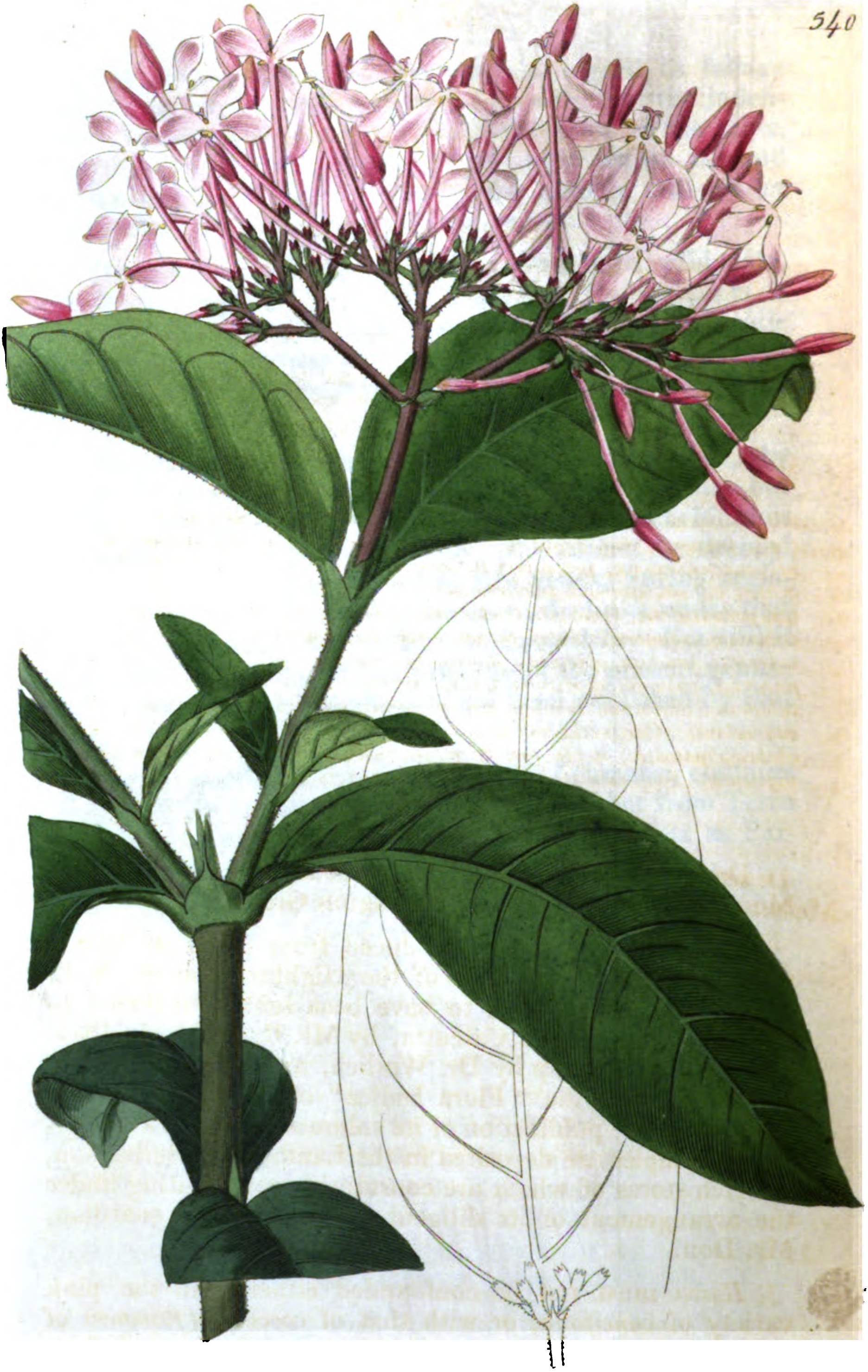
Drawn from a plant (we believe the only one in the country) which flowered last March in the collection of Mrs. Palmer, at Bromley in Kent. It had been brought by Captain Rawes from the gardens at Canton, where it probably found its way from some far more northern quarter of the Chinese empire; none of this generic type having, we believe, been observed as native of the levels of so low a latitude. Samples in a dried state had been previously transmitted by Mr. Reeves, a gentleman in the employment of the East India Company at Canton.

This very elegant species differs considerably in character from all which are known, but comes the nearest to the *cortusoides* of Siberia, especially in regard to foliage and pubescence, as well as habit of growth; but the indefinitely numerous segments, inflated distention of the calyx, progressive with the growth of the fruit within it, and toothed margin of the divisions of the corolla, still render it a striking anomaly among its congeners.

The plant not having been yet known in its wild state, can we be sure that the multiplication of the segments of the calyx does not arise from luxuriance, induced by exotic cultivation? In regard to the number of the teethlike valves by which the capsule opens at the summit, it is true to the generic type.

We should have continued the name of *sinensis*, by which the species was mentioned to us by Mr. Sabine; but we find a PRIMULA of that title in the Flora Cochinchinensis of Loureiro; an author, it is true, who cannot be deemed any great authority in regard to this genus, having registered the now well-known HYDRANGEA *hortensis* under that head, by the specific denomination of *mutabilis*. But still it is possible his PRIMULA *sinensis* may be of the present genus; and at all events our plant has not been published by that name.

The Monograph of this genus by M. Lehmann, contains 42 species, exclusive of the present and another from Terra del Fuego, recorded in the Banksian Manuscripts as PRIMULA *antarctica*.



M. Hart del. Pub. by J. Ridgway 170 Piccadilly May 1. 1821. S. Watts sc.

IXORA rosea.

Pink-flowered Highland Ixora.

TETRANDRIA *MONOGYNIA.*

Nat. ord. RUBIACEÆ. *Jussieu gen.* 196. *Div. VI.*
IXORA. *Suprà vol.* 2. *fol.* 100.

I. *rosea*, foliis subsessilibus oblongis acutis basin versùs angustatis cum sinu obsoleto, subtus villosis; cymis supradecompositis amplis laxis, terminalibus et in latere exteriore ramorum axillaribus: limbi laciniis oblongis, cuneatis, acutis. *Wallich in flor. ind. roxb.* 1. 398; *(è text. angl. vers.)*

Mattiū-chāndā. *Khasee.*

Frutex *robustus ramosus sub4pedalis cortice scabro brunneo;* rami *novelli villosi cinerei.* Fol. *patentia, coriacea, firma,* 5-6 *uncialia latitudine biunciali, fusco-virentia, suprà glabra nitida, subtùs pallida, villosa pube ad nervos conspicuiore:* pet. *crassi lignosi lineâ unâ vix longiores:* stipulæ *lato-ovatæ, villosæ, acumine subulato-elongato.* Cymæ *rotundatæ, folia æquantes, pedunculatæ, brachiato-trichotomæ, patentes, rubidæ, villosæ,* pedunculo communi *subunciali:* flores *carnei, numerosi, apice* pedicellorum *per trinos sedentes:* bracteæ *oppositæ, lanceolatæ, margine ciliolato connexæ.* Cal. *parvulus, oblongus denticulis* 4 *ciliolatis rubidis,* bracteolis *binis appressis subtensus,* ciliolarum *subulatarum crassarum sphacelatarum seriem in fundo suo celans.* Cor. *extùs villosa;* tubus *gracilis, unciâ longior;* limbi lac. *glabræ, patentes,* 4-*plo ferè breviores tubo.* Fil. *reflexa:* anth. *lineari-sagittatæ.* Stig. *rubicundum.* (E text. angl. vers.)

Drawn last summer in the hothouse of the nursery of Messrs. Barr and Brooks, Newington Green.

A species now first introduced from the East Indies, where it is said to be native of the Highlands on the N. E. confines of Bengal, and to have been sent from thence to the botanic garden at Calcutta, by Mr. R. Smith, in 1815. It was first taken up by Dr. Wallich, among the additions he is making to the "Flora Indica" of Roxburgh, during the progressive publication of its volumes. Several well-preserved samples are deposited in the Lambertian Herbarium, the rich stores of which are constantly accumulating under the arrangement of its diligent and intelligent guardian, Mr. Don.

Rosea must not be confounded either with the pink variety of *cuneifolia,* or with that of *coccinea (flammea* of Smith, Rees's cyclop., *chinensis* of Lamarck in encyc. 3. 344, and *stricta* of Roxb. in fl. ind. 1. 388) formerly distinguished as *incarnata* by Roxburgh, and still continued under that name by Sir J. Smith in Rees's Cyclopædia.

The fur on the young branches, peduncles, calyx, flower, bractes, and under side of the leaves, is too fine and inconspicuous to be satisfactorily expressed in our engraving, though plain enough, upon attentive observation, on the plant itself, of which it forms a distinguishing feature.

“ An erect, strong, branchy *shrub*, about 4 feet high,
“ with scabrous, brown bark. The *younger branches* pu-
“ bescent, slightly compressed towards the insertion of the
“ leaves, ash-coloured. *Leaves* subdecussate, spreading,
“ leathery and firm, 5-6 inches long, about 2 broad, taper-
“ ing towards the base, and there rounded or slightly emar-
“ ginate, dark green, bullate, smooth and shining above,
“ pale and pubescent underneath, especially along the mid-
“ rib and numerous nerves: *petioles* thick and woody,
“ scarcely more than a line long: *stipules* broad-ovate, pu-
“ bescent, ending in a long subulate adpressed point, con-
“ nected and stemclasping by means of a narrow membrane,
“ continuing within the base of the petioles, and concealing
“ a series of small rust-coloured cilia. *Corymbs* round, as
“ large as the leaves, mostly elevated on a peduncle, with
“ trichotomous brachiate spreading pubescent reddish pe-
“ duncles, the lower ones an inch long; the whole forming
“ an ample terminal inflorescence of innumerable beautiful,
“ pale rose-coloured, ternate, sessile flowers: *bractes* op-
“ posite lanceolate, connected by a ciliated margin. *Calyx*
“ very small, oblong with 4 reddish lanceolate ciliated
“ teeth, supported by 2 adpressed bractes at the bottom,
“ within which there is a series of fleshy, subulate, wither-
“ ing and sphacelated *cilia*, as in the *Asclepiadeæ* and *Apo-*
“ *cyneæ*. *Corolla* pubescent; tube slender a little more than
“ an inch long; *segments* smooth spreading, at last re-
“ flexed, equalling ¼ of the tube in length. *Filaments* re-
“ flexed: *anthers* linear-sagittate. *Stigma* reddish.” *Wallich.*

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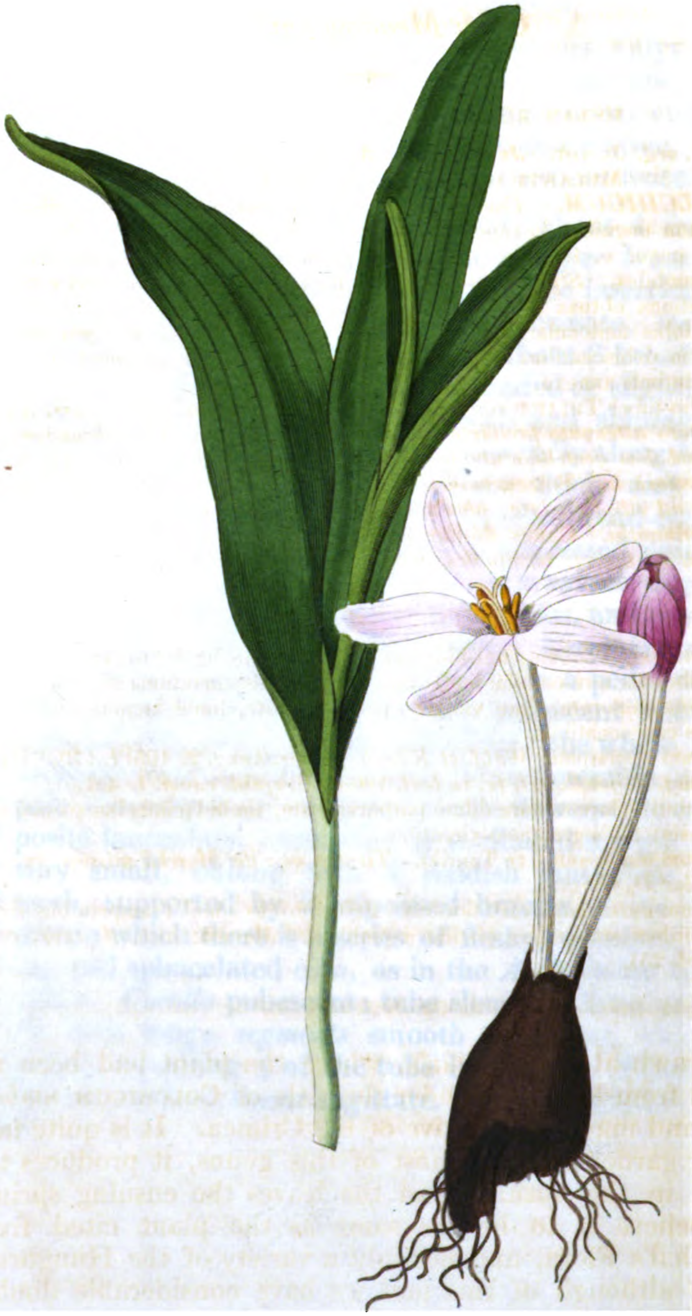

H. Hart del.   Pub. by J. Ridgway 170 Piccadilly May. 1. 1821.   J. Watts sc.

COLCHICUM arenarium; *β. umbrosum.*

Crim Meadow-saffron.

HEXANDRIA *TRIGYNIA (v. modò MONOGYNIA).*

Nat. ord. JUNCI. *Jussieu gen.* 43. *Div. IV.*
MELANTHACEÆ. *Brown prod.* 1. 274.

COLCHICUM. *Cor.* semisubterranea, infundibuliformis, disjunctis laciniarum unguibus hexapetala, vel istis in tubo conjunctis 6-fida. *Stam.* summo ungui v. tubo inserta: *anth.* introrsæ, erectæ v. subincumbentes sæpiùs mobiles. *Styli* 3 filiformes, vel nunc unus; *stig.* 3 linearia canaliculato-continua obtusa replicata. *Caps.* membranacea, oblonga, acuminata, triloba lobis unilocularibus, nunc inflatis, ad axim connexis, per suturam interiorem dehiscentibus: *sem.* numerosa, subglobosa, loculamentorum marginibus intimis annexa.

Bulbo-tuber TULIPÆ *simile, ovato-acuminatum, basi obliquatum, à margine altero attenuato-producto radicans, tunicâ crustaceo-membranaceâ vestitum, sobolem gemellam utrinque de basi enixum post peractam fructificationem emoriens.* Fol. *carnosula, 3-plura, alterna, infernè caulina, linearia angusta ad elliptica lata, plus minus tardiora flore, fructûs contemporanea, basi vaginantia.* Caulis florifer *humo latens,* fructifer *prominens.* Flores 1-*plures, spathacei, terminales, majusculi, recti, rubentes v. candicantes.*

C. *arenarium,* 4-folium, uni-bi-(pluri?)florum; foliis ligulato-lanceolatis, staminibus ter ferè corollæ limbo brevioribus, subæquantibus stigmata.

(α) sæpiùs uniflorum, flore violaceo-purpurascente, limbi laciniis lanceolatis, foliis canescentibus.

Colchicum arenarium. *Wald. et Kitaib. pl. rar. hung.* 2. 195. *t.* 179. *Willd. in mag. d. gesell. nat. fr. zu berl.* 1808. 26. *ejusd. enum.* 1. 401.

(β) bi-(pluri?-)florum, flore dilutè purpurascente, limbi laciniis lineari-oblongis obtusis; foliis gramineo-virentibus.

Colchicum umbrosum; (e Tauriâ). *Titulus quo de Moschâ missum fuit exemplar D. Griffini.*

Colchicum *autumnalis* var^s. floribus vulgò pluribus simul erumpentibus duplo minoribus staminibus pistillo æqualibus. *Marsch. bieb. fl. taur. cauc. suppl.* 281.

Drawn at Mr. Griffin's, where the plant had been received from Moscow, under the title of COLCHICUM *umbrosum,* and marked as native of the Crimea. It is quite new in our gardens. Like most of this genus, it produces the flower in the autumn and the leaves the ensuing spring. We believe it to be the same as the plant cited from Marschal's Flora, and possibly a variety of the Hungarian plant; although of this fact we have considerable doubt; the two differing not only in colour of the flower, but also

in that of their foliage, and the segments of the limb being of a different form in each. As this point however cannot at all events be satisfactorily decided without a mutual comparison of their samples, we have placed the two distinctly under the same specific head.

SPECIES.

Merendera.	*Nob.* MERENDERA Bulbocodium. *Redouté liliac. tab.* 25. Colchicum montanum minus versicolore flore. *Clus. hist.* 1. 200. *cum ic.*
Bulbocodium.	*Nob. in Curtis's magaz. fol. verso* 1028. BULBOCODIUM vernum. *Curtis's magaz.* 153. *Willd. sp. pl.* 2.
montanum *.	*Lin. sp. pl. ed.* 1. 1. 342. *Willd. sp. pl.* 2. 273. *Clus. hist.* 1. 200.
arenarium.	*In loco præsenti.*
alpinum.	*Redouté liliac.* 8. *tab.* 467.
variegatum.	*Nob. in Curtis's magaz.* 1028. *Willd. sp. pl.*
autumnale.	*Engl. bot. tab.* 133.
polyanthon.	*Nob. in Curtis's magaz. fol. verso* 1028. Colchicum pannonicum. *Clus. hist.* 1. 199.
byzantinum.	*Nob. in Curtis's magaz.* 1122. *Clus. hist.* 1. 199, 200.

TULIPA and COLCHICUM have no recorded representatives in America, nor within the tropics of either continent. The two appear to be nearly coextensive in their distribution, and limited to the temperate regions of Europe and the confining regions of the North of Asia and Africa. The southern part of Russian Tartary seems to be the main hive of the Tulips.

MELANTHIUM, perhaps too artificially separated from TULIPA and to which TULIPA *breyniana* has only recently reverted, appears to be restricted to the Cape of Good Hope.

HELONIAS is the nearest co-ordinate type yet found in America.

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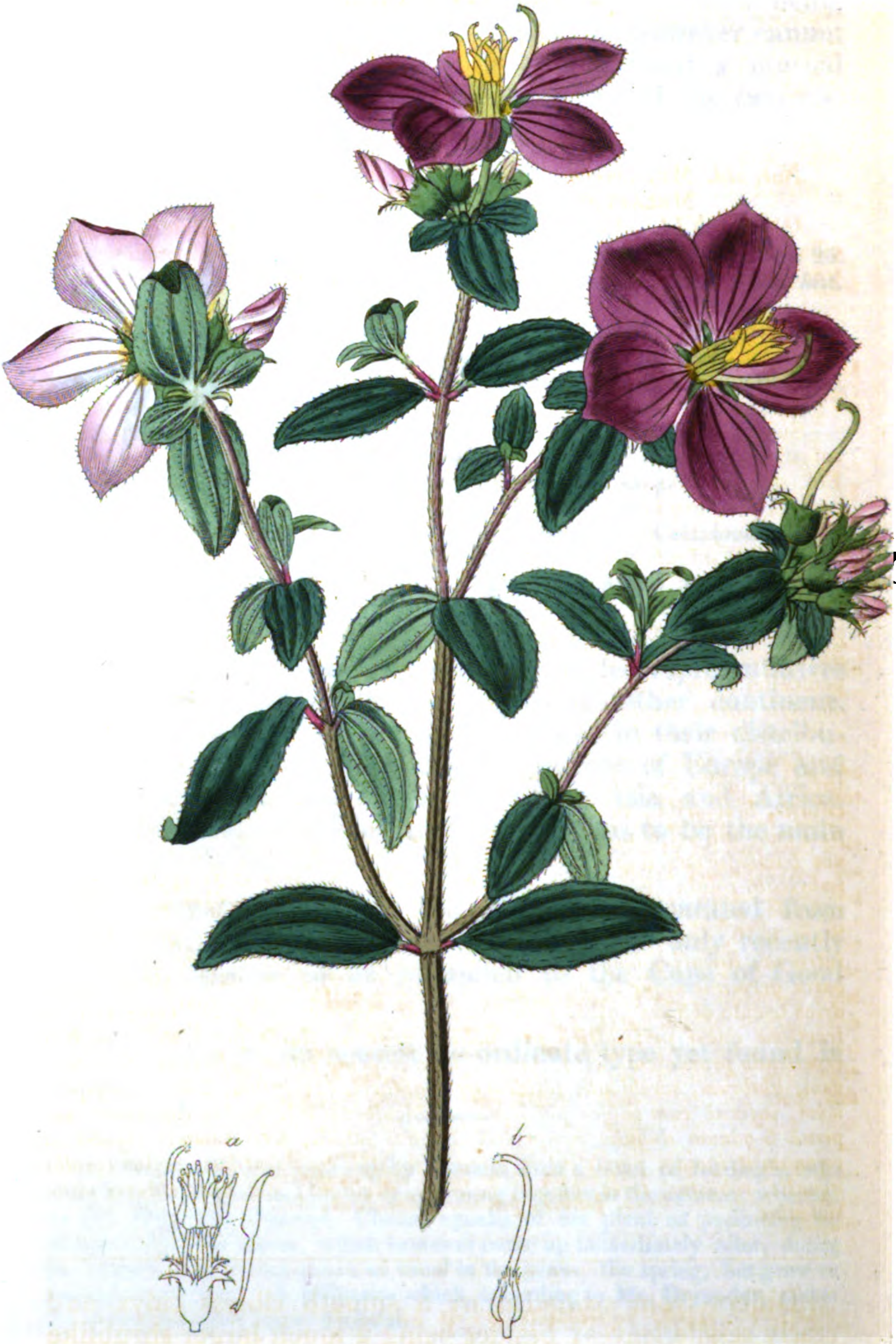
* This species was taken up by Linnæus from a letter of Lœfling's, who describes the flowers and leaves as appearing together in the autumn; whereas, as Mr. Dryander observes, Clusius speaks of his plant as producing the flowers before the leaves, which however come up immediately after, during the autumn, and do not await, as usual in the genus, the spring, but grow on through the winter. A difference which, according to Mr. Dryander, makes the synonym from Clusius doubtful.



W. Hart del. Pub by J. Ridgway 170 Piccadilly June 1 1821. [illegible]

OSBECKIA chinensis.

Chinese Osbeckia.

OCTANDRIA *MONOGYNIA.*

Nat. ord. MELASTOMÆ. *Jussieu gen.* 328. *Div. II.*
MELASTOMACEÆ. *Brown bot. of Congo.* 15.

OSBECKIA. *Cal.* dentibus 4-5 deciduis, squamis totidem intermediis ciliaribus. *Petala* 4-5. *Antheræ* rostratæ. *Caps.* 4-5-locularis, tubo truncato calycis vestita. *Smith in Rees's cyclop. in loco.*

O. *chinensis*, foliis sessilibus, calycibus glabris. *Willd. sp. pl.* 2. 300.

Osbeckia chinensis. *Linn. suppl.* 215. *Osb. it. (ed. angl.)* 1. 342. *t.* 2. *f.* 1. 2. *et vol.* 2. 350. *Lamarck illustr. t.* 283. *f.* a. b. c. *Loureiro cochin.* 229.

Suffrutex? *sesqui-bipedalis, debilis, ramosus, distantèr foliosus:* rami *subrubentes, appressè hispidi, 4-goni, axillares, alterni, divisi, patentes.* Fol. *decussato-opposita, subsessilia, lanceolato-oblonga, 3-nervia, setulis decumbentibus hispida, infra pallida hirsutioraque, margine levissimè crenulata, subsesquiuncialia v. breviora latitudine ferè ⅓ unciæ, divaricato-patentia:* petioli *subrubentes brevissimi v. subnulli, basi lineâ prominulâ interpetiolari setis elongatis porrectis ciliatâ per paria utrinque connexi.* Flores *lilacino-rubentes, erecti, terminales, contracto-cymosi;* cymæ *simplices trifloræ v. compositæ multifloræ foliis cruciato-quaternis involucratæ; pari opposito duplo v. ultra minore;* pedunculi *setis raris hispidi, breves, teretes, bi-trichotomi,* pedicellis 1-*floris, trichotomiarum lateralibus cum* bracteis 2 *oppositis ovato-oblongis acutis hispido-ciliatis ad basin.* Cal. *brevior corollâ, virens;* tubo *coriaceo-firmo cupulato-oblongo subglabro infra limbum tuberculis paucis seta præfixis hic indè muricata vel nunc uno sub quodque segmentum limbi, persistente;* limbo *5-partito stellato, deciduo, segmentis è basi latâ acuminatis, ciliatis, brevioribus tubo, herbaceo-membranosis, ciliatis, setâ elongatâ præfixis cum unâ vel et alterâ ad dorsum, per* lobulos *totidem intercalares alternos bacilliformes duplo breviores setâ præfixos deciduos interceptis.* Cor. *imbricato-rotata:* pet. 4-6 *(rariùs 6), ¾ unciæ v. circitèr profunda, oblato-rotunda, supernè ciliata, tubo summo calycis inserta,* unguiculo *obsoleto luteo.* Stam. 8-10, *eodem puncto ac petala, quibus æqualia, inserta;* antheræ *flavæ introrsæ, lineari-oblongæ,* filamento *articulatìm impositæ, ante anthesin ad basin germinis usque immerso-inflexæ, deindè erectæ,* rostro *continuo cylindrico* osculo *obliquo patulo forato terminati, ventre corrugato (rugis ex contractione quasi peristalticâ pro polline grumoso fluido per rostri orificium expellendo provenientibus?)* Germ. *tubo calycino latens, albicans, subrotundum, glabrum, scrobiculis totidem quot antheris exculptum, 5-loc., polyspermum, infernè cum calyce per septa scrobiculorum intergerina connexum, supernè 5-gonum angulis compressis à dorso setosis, setìs summis rigidis in coronam strigosam persistentem circa basin styli confluentibus:* stylus *corollæ æqualis, robustus, teres, glaber, pallidus, deciduus;* stig. *apex obtusus villosiusculus.*

Differs from *zeylanica* by a smooth ribless calyx and nearly sessile leaves; besides being a much larger shrublike plant, from a foot and a half to two feet high.

The flowers vary on the same individual from with four to five, and even six petals, and from with eight to ten stamens. It was observed by Osbeck and Loureiro growing wild about Canton, and is mentioned by the first as an article of the chinese pharmacy.

On the limits, structure, and generic division of the *Melastomaceæ,* the order where our plant belongs, Mr. Brown offers the three following remarks.

" 1st. The MEMECYLON, as M. du Petit Thouars had " already suggested, and PETALOMA of Swartz both belong " to this order, and connect it with *Myrtaceæ,* from which " they are distinguished only by the absence of the pellucid " glands of the leaves and of other parts, existing in all the " genera really belonging to that extensive family."

" 2dly. There are very few *Melastomaceæ* in which the " germen does not in some degree cohere with the tube of " the calyx; MERIANA properly so called, being, perhaps, " the only exception."

" And in the greater number of instances where, though " the germen is coherent, the fruit is distinct, it becomes " so from the laceration of the connecting processes already " described;" *(see vol.* 5. *fol.* 363 *(overleaf) of this Register).*

" 3dly. That the generic divisions of the whole order re" main to be established. On examination, I believe, it will " be found that the original species of the Linnean genera, " MELASTOMA and RHEXIA, possess generic characters suf" ficiently distinguishing from the greater part of the plants " that have been since added to them by various authors. " In consequence of these additions, however, their bota" nical history has been so far neglected, that probably no " genuine species of MELASTOMA, and certainly none of " RHEXIA, has yet been published in M. Bonpland's splendid " and valuable monographs of these two genera." *Brown bot. of Congo.* 17.

The corrugation of the lower part of the cells of the mature anther, seems the effect of a kind of peristaltic contraction for the expulsion of the grumously fluid pollen, by the orifice of the pipe at the end of the anther.

Drawn in April last, in the hothouse at Messrs. Colvill's, in the King's Road, Chelsea.

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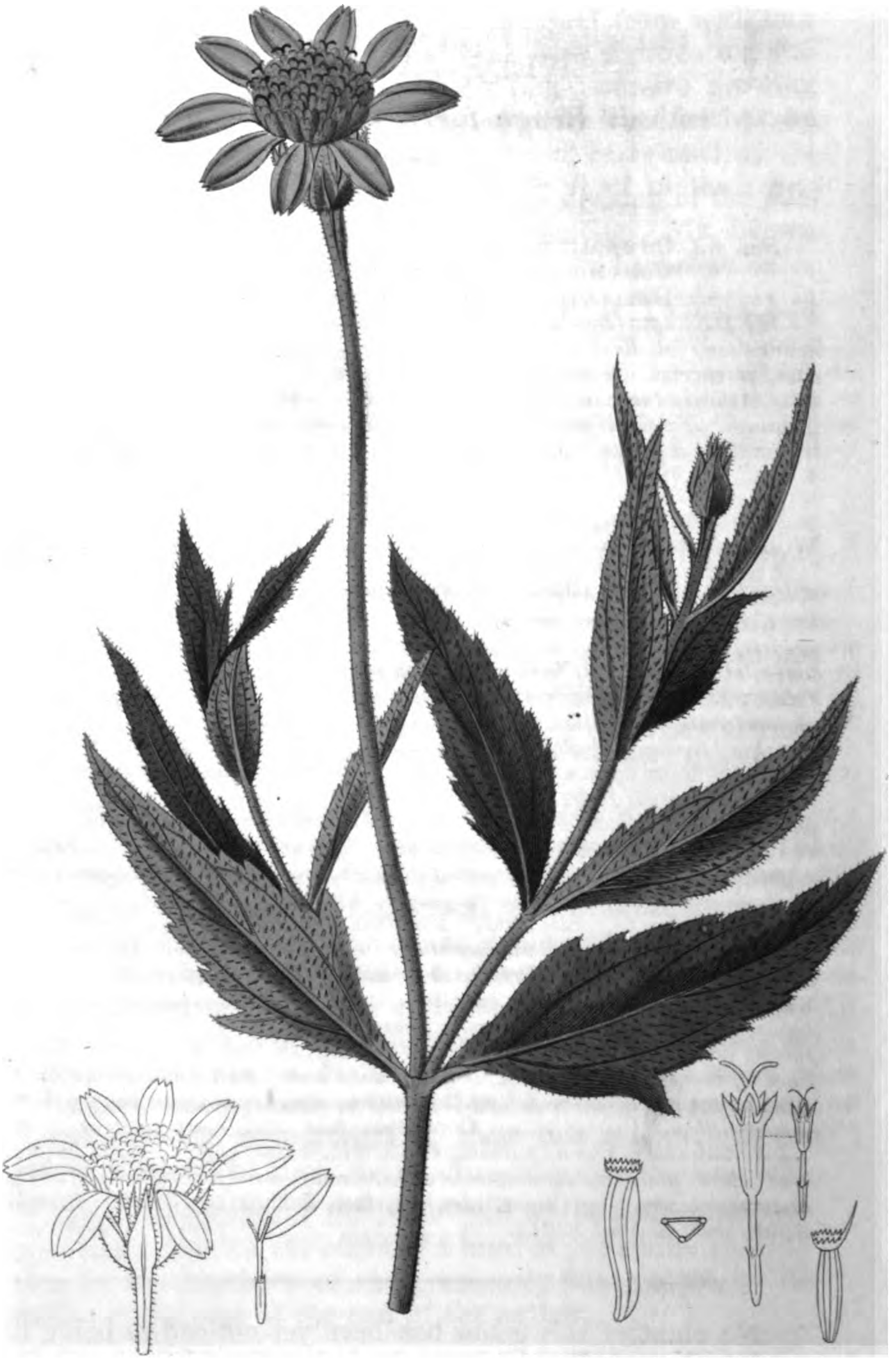

M. Hart del. Pub by J. Ridgway 170 Piccadilly June 1 1821 S. Watts sc.

WEDELIA hispida.

Rough-furred Wedelia.

◆

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. VI.*
HELIANTHEÆ. *Cassini in journ. de phys.* 88 (*an* 1819). 191.

WEDELIA. *Involucrum (calyx)* subsemiglobosum, polyphyllum, laxè imbricatum, *foliolis* exterioribus sæpè majoribus, patulis. *Recept.* subplanum, paleaceum. *Flosc. disci* tubulosi, hermaphroditi; *radii* ligulati, feminei. *Achenia (semina)* coronata urceolo minuto, membranaceo, laciniato-fimbriato. *Fruticuli aut herbæ, procumbentia, hispida, oppositifolia. Flores terminales aut alares, solitarii, pedunculati, flavi.* Kunth nov. gen. et spec. 4. 214.

W. *hispida*, foliis lanceolatis aut subovato-lanceolatis, acuminatis, serratis, dente utroque infimo majore; foliolis involucri (calycis) exterioribus lanceolatis aut ovato-lanceolatis. *Kunth loc. cit.* 215. *tab.* 371.

Herba ramosissima, procumbens; ramis *oppositis, dichotomis, teretibus, striatis, hispidis.* Fol. *opposita, petiolata, lanceolata,* superiora *subovato-lanceolata, acuminata, basi valdè angustata et in petiolum decurrentia, infernè integerrima, supernè argutè serrata, dente infimo utriusque lateris majore, reticulato-triplinervia, nervis subtùs prominentibus, membranacea, utrinque hispida, adjecto petiolo bipollicaria, 6-7 lineas lata:* petioli *breves, hispidi.* Flores *terminales, demùm alares, solitarii longissimè pedunculati, magnitudine floris* BIDENTIS cernuæ: pedunc. 6-8-*pollicares, teretes, striati, hispidi, nudi.* Invol. (cal.) *hispidum, subhemisphæricum, polyphyllum,* foliolis *laxè imbricatis;* 4-5 exterioribus *lanceolatis aut ovato-lanceolatis, acutis, planis, membranaceis, integerrimis, hispidis, semipollicaribus;* interioribus *duplo brevioribus oblongis-scarioso-diaphanis, similibus paleis receptaculi.* Recept. *subplanum, paleaceum;* paleis *lanceolatis, brevioribus, acutis, carinatis, uninerviis, glabris, scarioso-diaphanis.* Flosc. disci *crebri, tubulosi, hermaphroditi:* radii 6-7 (*circitèr* 15 *ex Bonpland*) *ligulati, feminei.* FLOSC. HERMAPHR^{i}. Cor. *flava, glabra; tubo tenui, tereti; limbo infundibuliformi 5-nervio, 5-dentato; dentibus ovatis acutis enerviis puberulis pallidis.* Stam. *summo tubo inserta:* fil. *glabra:* anth$^{\ae}$. *connatæ, inclusæ, nigricantes.* Germ. *lineare, compressum, pilosiusculum urceolo minuto sessili fimbriato terminatum:* stylus *glaber inclusus:* stig. 2 *partita exserta, laciniis patenti-recurvatis pubescentibus.* FLOSC. FEM^{i}. Cor. *flava; tubo tenui, compresso;* ligula *oblonga, 2-dentata, plana, patente, sub2nervia, 5 lineas longa:* germ. *lineare, 3-angulare, glabrum, coronatum urceolo minuto sessili fimbriato:* stylus *vix exsertus, glaber:* stig. *2-partitum, exsertum, laciniis capillaceis.* Fructus *desideratur.* Kunth l. c. 215.

No plant of this genus has been yet noticed as being in our gardens. The introduction of the present species is due to Mr. Lambert, with whom it flowered last summer at Boyton-house, in Wiltshire; whence we had the sample

that has been drawn. The seed had been sent by Professor Lagasca, from Madrid.

Native of New Spain, where it was observed by Messrs. Humboldt and Bonpland in the Valley of Tenochtitl, at the elevation of 1200 fathom above the level of the sea, producing its blossom in June.

A branching hispidly herbaceous plant; branches opposite, dichotomous, round, streaked, rough. *Leaves* opposite, petioled, lanceolate, *upper ones* subovately lanceolate, taper-pointed, very much narrowed at the base and decurrent along the petiole, quite entire below, sharply serrate upwards, the lowest tooth on each side being the largest, reticulately triplenerved, membranous, rough-furred on both sides, together with the petiole about 2 inches long, 6-7 lines broad: *pet.* short. *Flowers* terminal, finally axillary, solitary, long stalked, about the size of those of the Nodding Bur-Marygold: *peduncles* 6-8 inches long, round, fluted, hispid, leafless. *Calyx* rough-furred, nearly hemispherical, many-leafletted; *leaflets* loosely imbricated, 4-5 *outer ones* lanceolate or ovately lanceolate, pointed, flat, membranous, quite entire, rough-furred, about half an inch long; *inner* twice shorter, oblong, scariose, transparent, resembling the chaffs (paleæ). *Receptacle* flattish chaffy; *paleæ* lanceolate, shorter, pointed, keeled, one-nerved, smooth, scariose, transparent. FLORETS OF THE DISK numerous, tubular, stamen and pistil-bearing, deep yellow, smooth; *tube* slender, cylindrical, *limb* funnelform 5-nerved 5-toothed, *lobes* ovate pointed nerveless downy pale: *anthers* connate, enclosed, blackish; *germen* linear, compressed, slightly haired, with a small sessile urceolate fringed rim by way of seed-crown: *stigmas* 2, protruded, recurvedly spreading and pubescent: OF THE CIRCUMFERENCE (RAY) 6-7 (15 according to Bonpland) ligulate, pistilbearing, deep yellow; *tube* slender, compressed, *limb* ligulate oblong, 2-toothed, flat, spreading, with about 2 nerves, 5 lines long: *germen* linear, triangular, smooth, with a small sessile fringed urceolate seedcrown; *style* scarcely protruded, smooth; *stigmas* 2, capillary.

The description is from the latin of M. Kunth.

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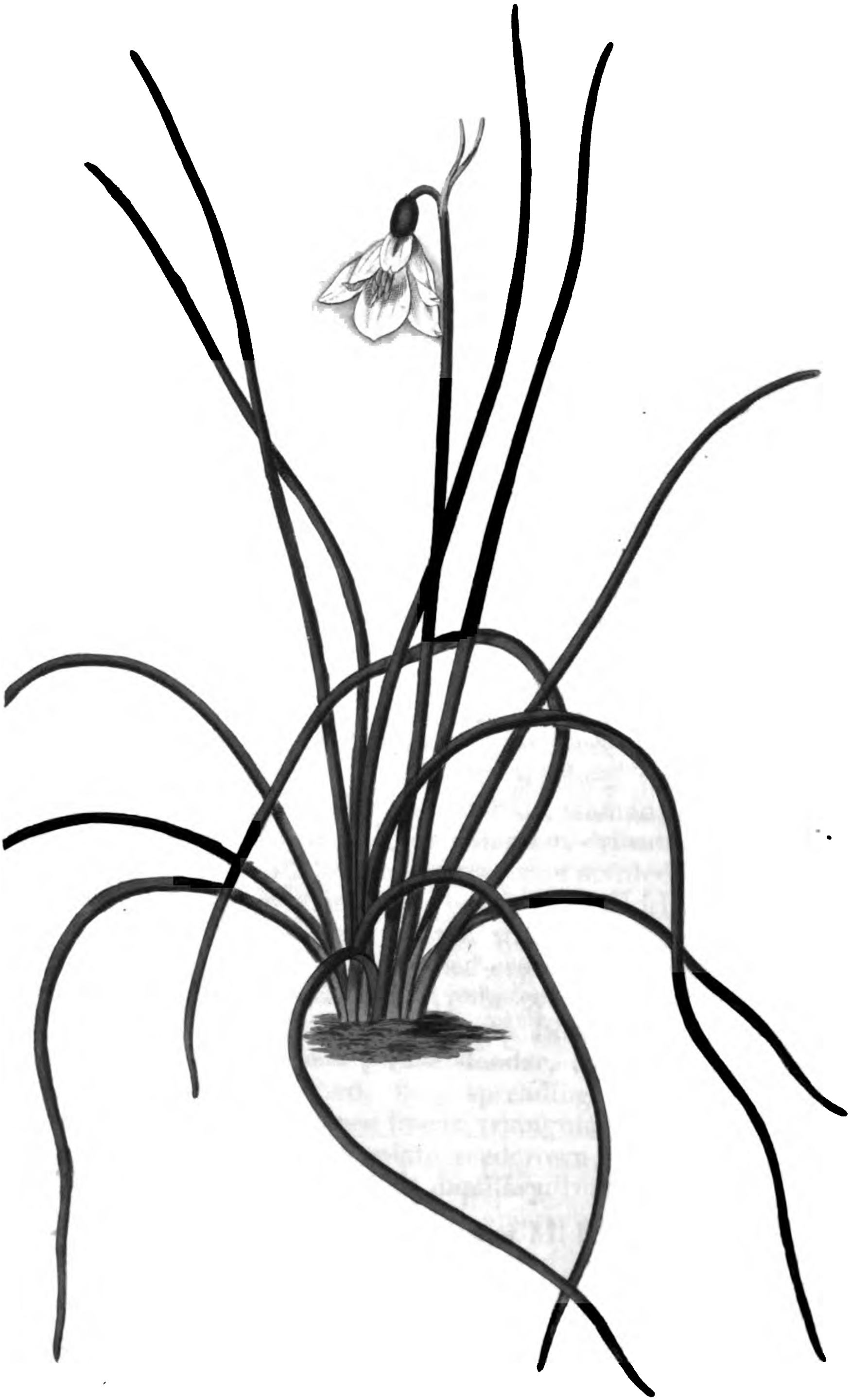


M. Hart del.

Pub. by J. Ridgway 170 Piccadilly June 1. 1821.

J. Watts sc.

LEUCOJUM tricophyllum; *α; uniflorum.*

Narrow-leaved Spring Snow-flake.

◆

HEXANDRIA *MONOGYNIA.*

Nat. ord. Narcissi. *Jussieu gen.* 64. *Div. II.* Germen inferum. Amaryllideæ. *Brown prod.* 1. 296. *Sect.* I. Radix bulbosa. Flores spathacei, umbellati, rarò solitarii.

LEUCOJUM. Spatha follicularis, pedunculata, 1-multiflora. *Cor.* cernua, sexpartita, campanulata, regularis, subæqualis. *Fil.* disco glanduloso corollæ inserta; *anth.* apice utrinque dehiscentes. *Stig.* simplex. *Caps.* loculamentis biseriato-polyspermis. Strumariæ *hinc, indè* Galantho *proximum.*

L. *tricophyllum,* (vernale) petalis integerrimis, stylo filiformi puncto stigmatoso mutico.

Leucojum tricophyllum. *Brotero flor. lusit.* 1. 552. *Nob. in Journ. of scien. and the arts.* 1. 175. *Willd. enum. suppl.* 16.

Leucojum grandiflorum. *Redouté liliac.* 217.

Leucojum autumnale. *Redouté liliac.* 150; *quoad fig.* 2.

(α) uniflorum.

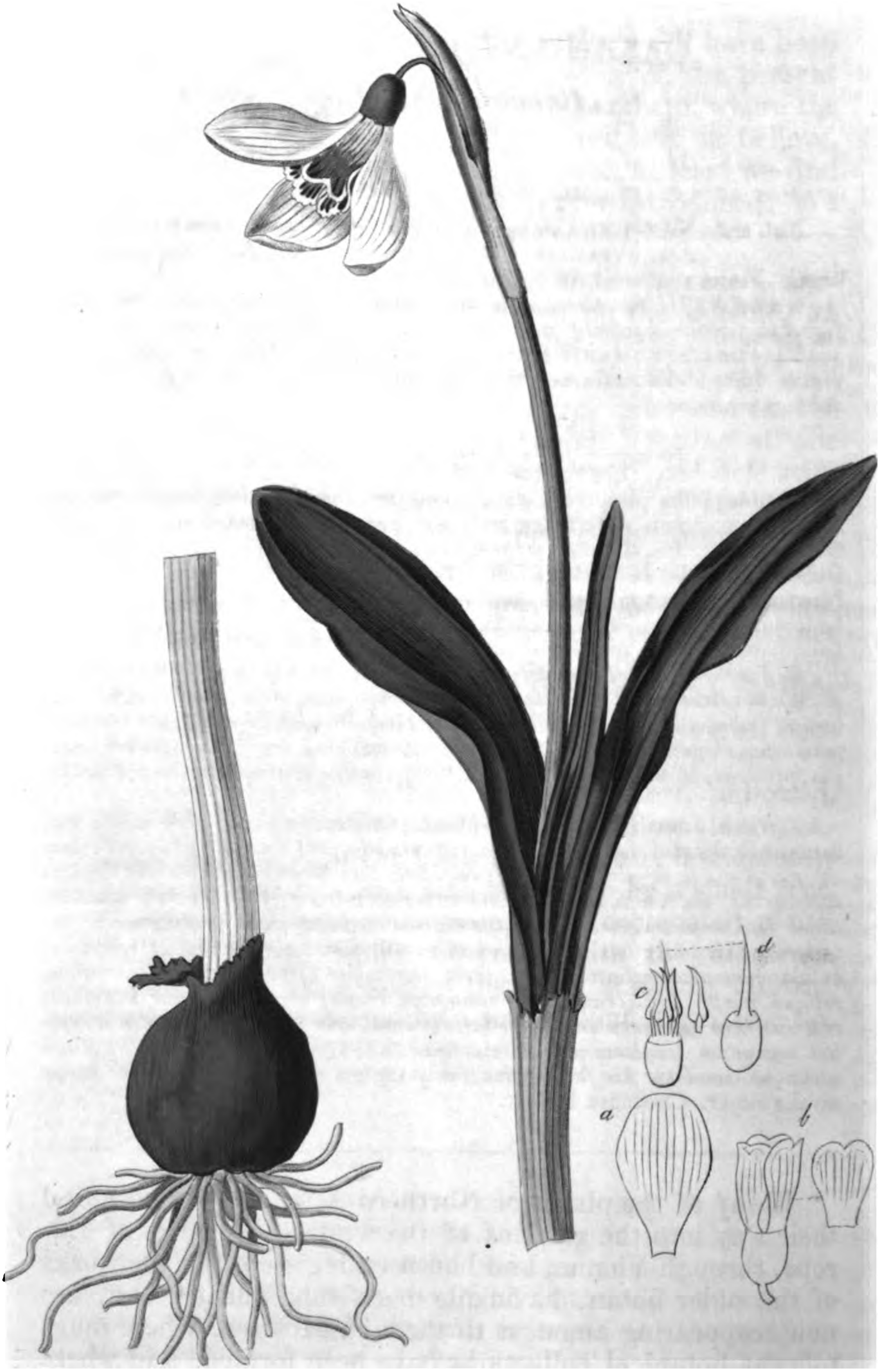
(β) bi-quadri-florum.

Fol. *membranacea plurimùm longiora scapo, linearia, obtusula, extùs convexa striata, intùs estriata canaliculata, supernè plana, cinereo-virentia (atomis vesiculosis albidis creberrimis sub lente manifestis contecta).* Scapus *vernalis, 4-5-uncialis, viridis, teres, erectus.* Spatha *monophylla; erecta, bifissili-dehiscens:* pedunculus *firmulus, recurvus.* Germ. *breve, oblongum, viride, estriatum, exsulcum.* Cor. *alba, firmula, turbinato-campanulata;* laciniæ *disco longitudinali crassiore striato absque omni carinâ vel canaliculo,* exteriores *ovali-oblongæ, acuminatæ, integerrimæ, planæ, mucrone basi uncato intùs pruinoso;* interiores *subbreviores, latioresque, obovato-ellipticæ, apice rotundatæ cum mucrone obsoleto, integerrimæ.* Stam. *recto-conniventia, ¼ v. circa corollâ breviora:* fil. *3-4-plo breviora antherâ, distantia, curva, compresso-linearia, alba:* anth. *vitellinæ, majusculæ, sagittato-lineares, basi posticè affixæ, fasciculato-contiguæ, utrinque summitate poro laterali longitudinali dehiscentibus.* Discus glandulosus *staminifer luteo-virescens 6-crenato-plicatus, lobulis senis filamenta alternè intercipientibus.* Stylus *albus stamina parùm longior, erectus, 3-sulco-filiformis, apiculo stigmatoso mutico obtuso pruinoso.*

Native of Portugal and the Coast of Barbary. Very nearly akin to *autumnale,* but flowers in the spring instead of the autumn; has all the petaloid segments of the corolla entire, instead of the alternate ones indented at the top, and wholly white flowers instead of those tinged with red. The two differ from *vernum* and *æstivum* materially, in having a filiform instead of a clavate style.

The figures of the species in Redouté's work have been taken from dried samples. The drawing of the present variety was made at Mr. Griffin's, South Lambeth, where the bulbs had been obtained from Lisbon; and are, we believe, the first that have been seen in our gardens, at least we find no mention of the species having been ever introduced. We suppose it would do well in the open ground.

Leaves membranous, much longer than the scape, narrowly linear, blunt, convex and fluted on the outside, on the inside streakless and channelled, flat at the upper part, greyish green (viewed through a glass, thickly beset with white minute vesicular particles). *Scape* produced in the spring, 4-5 inches high, upright, round. *Spathe* of one piece; upright, splitting into two segments: *peduncle* stiffish, recurved. *Germen* short, oblong, green, streakless, furrowless. *Corolla* white, firm, turbinately campanulate, *segments* with a thickened fluted longitudinal disk without any keel or channel; *outer ones* ovally oblong, taper-pointed, quite entire, flat, with a frosted pubescent mucro (distinct point), hooked at the base; *inner ones* rather shorter and broader, obovately elliptical, rounded at the point, with a nearly obsolete mucro, quite entire. *Stamens* upright, converging, about ¼ shorter than the corolla: *filaments* 3-4 times shorter than the anthers, standing apart, imbowed, compressedly linear, white: *anthers* deep yellow, large, sagittately linear, fixed at the back of their base, fasciculately contiguous, opening on each side at the top by a small rent. *Staminiferous disk* yellowish green, with 6 crenated plaits, and 6 small lobes, which alternate with the filaments. *Style* white, but little longer than the stamens, filiform, three-furrowed, terminated by a small blunt stigmatose tip.



J. Hart del.   Pub by J. Ridgway 170 Piccadilly Dec 1. 1820.   J. Watts sc.

GALANTHUS plicatus.

Russian Snow-drop.

HEXANDRIA *MONOGYNIA.*

Nat. ord. NARCISSI. *Jussieu gen.* 54. *Div. II.* Germen inferum. AMARYLLIDEÆ. *Brown prod.* 1. 296. *Sect. I.* Radix bulbosa. Flores spathacei, umbellati, rarò solitarii.

GALANTHUS. Corollæ laciniis petalodibus, 3 alternis difformibus. *Nobis in journ. of science and the arts.* 2. 344. Cætera omnino LEUCOJII quod proximâ STRUMARIÂ differt per spatham follicularem antherasque inversas apice dehiscentes nec non filamento longiores. *Ovula* in G. *plicato* oblonga rostrata.

G. *plicatus*, foliis plicatis: plicâ utrinque margine parallelâ, spatha pedunculum superante. *Marsch. à bieb. flor. taur. cauc. suppl.* 255.
Galanthus plicatus. *Curtis's magaz.* 2162.
Galanthus nivalis. β. *Redouté liliac.* 200. B; *(absque icone).*
Narcissoleucojum trifolium majus. *Tournef. inst.* 387.
Leucojum bulbosum secundum. *Tabern. krauterb.* 2. 1005.
Leucojum bulbosum præcox byzantinum. *Clus. hist.* 1. 169.

Differt nivali, *occidentali Europæ familiari,* staturâ *in universum majore atque robustiore,* foliis *latioribus utrinque propè marginem plicâ longitudinali insigni instructis, hinc bicarinatis illinc bicanaliculatis,* pedunculo *breviore,* petalorum nectarii *plagâ viridi latiore. Discrimina hæc, antiquiorum vestigia premens, nuper agnovit atque culturâ confirmavit amicissimus Fischer.* Marsch. l. c.

Tertium genus (GALANTHUS plicatus) *secundo* (nivali) *ferè simile est, ineunteque Martio binà folia promit illi similia, sed latiora, æruginei etiam coloris, floris gemmam ut in illo complectentia: crassiusculus caulis tandem succrescens, unicum florem vaginulâ inclusum sustinet, formâ* nivali *similem, duplò ferè majorem,* 3 *externis foliis alarum modo expansis, prorsùs niveis, interioribus verò brevibus, bisulcis ut in* nivali, *simul coeuntibus, et veluti tubulum quempiam efformantibus, foris plerumque circà ungues virescentibus, reliquâ parte albis, oras tamen secundùm crenas virides maculæ inficiunt, interius verò aut magnâ ex parte viridia sunt, aut octo radiis ab imis unguibus secundùm longitudinem ductis prædita:* LEUCOJI verni *fragrantiam utcunque æmulatur hic flos, et suavius quidpiam spirare mihi videtur: radix* nivalis *major.* Clus. hist. loc. cit.

Many of the plants of Northern Asia, which had found their way into the gardens of the western countries of Europe, through Vienna, and had been registered in the works of the older botanists, having been subsequently lost, are now reappearing amongst us through Moscow, where magnificent botanical collections have been formed, and where the communication with the Asiatic provinces of the Russian

Empire is easy and frequent. The present plant is an instance, among many, of this nature. According to Clusius the species was brought by the way of Constantinople to Vienna, about 1592; but had entirely disappeared, until lately reintroduced through Moscow by Mr. Griffin; with whom it seems to thrive in the open border as well as the common sort; but flowers rather later in the spring.

Plicatus had never been entered as a separate species in any of the botanical works since the promulgation of the Linnean System, till it appeared in the supplement of the Flora Taurico-caucasica, where it is distinguished from *nivalis*, by being larger in all its dimensions, by the two curious longitudinal plaits within side the leaves, a shorter peduncle, and the larger green mark of the three smaller petaloid segments of the corolla. Its permanence as a species is said to have been experimentally proved by Dr. Fischer in the Gorenki garden at Moscow.

A native of the Asiatic provinces of the Russian and Turkish Empires.

The genus is distinguished from Leucojum, by three alternate segments of the corolla being much smaller than the other three, of a thicker consistence and notched at the end; and from Strumaria by the anthers being inverted and bursting at the upper end only.

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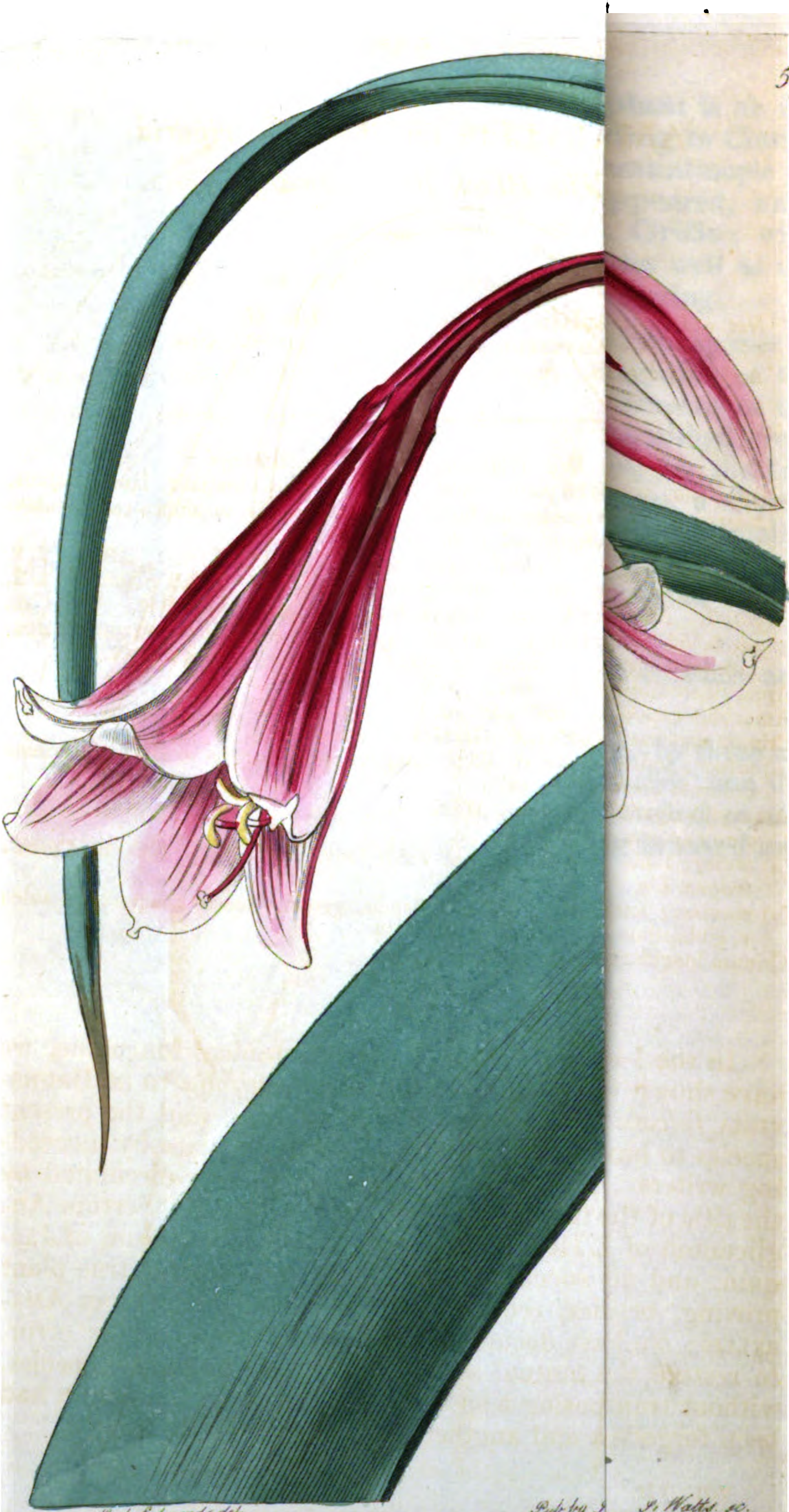

Syd. Edwards del.

Pub by J

J. Watts sc.

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AMARYLLIS longifolia; *α. riparia.*
The Black River Amaryllis.

HEXANDRIA *MONOGYNIA.*

Nat. ord. NARCISSI. *Jussieu gen.* 54. *Div. II.*
AMARYLLIDEÆ. *Brown prod.* 1. 296. *Sect. I.*
AMARYLLIS. Suprà vol. 3. *fol.* 226.

Div. Bulbispermæ; foliis multifariis.

A. ***longifolia***, umbellâ pauci-multiflorâ; foliis lorato-elongatis, lato-subulatis, margine scabris; pedicellis brevibus; limbo corollæ turbinato-campanulato breviore tubo. *Suprà vol.* 4. *fol.* 303.

Amaryllis longifolia. *L'Heritier sert. angl.* 13. *Hort. Kew.* 1. 419. *ed.* 2. 2. 227. *Jacq. ic. rar.* 2. 364. *ejusd. coll.* 4. 205. *ejusd. fragm.* 3. *t.* 2. *fig.* 1. *Nobis in Curtis's magaz.* 661. *Redouté liliac.* 347. *Willd. sp. pl.* 2. 56; *(excluso Linnæo cum synonymis suis* BRUNSVIGIAM falcatam *intelligente). Nobis in journ. of science and the arts.* 2. 360.

Amaryllis bulbisperma. *Burm. prod.* 9.

Amaryllis capensis. *Mill. dict. ed.* 8. *n.* 12.

Crinum capense. *Herbert in Curtis's magaz.* 2121. 5.

(α) ***minor;*** bulbo instar caudicis elongato, angusto; foliis glaucis, germine colorato breviore pedicello.

Amaryllis riparia. *Burchell MSS.*

Crinum capense. *β. Herbert. l. c.*

(β) ***major;*** foliis glaucis, germine viridi breviore pedicello. *Nob. in Curtis's magaz. l. c.*

(γ) ***maxima;*** longiflora, foliis non glaucis, germine lucido absque omni sulco v. gibbositate. *Suprà vol.* 4. *fol.* 303.

Crinum longiflorum. *Herbert loc. cit.* 6.

In the 1443d article of Curtis's Botanical Magazine, we have shown the Linnean AMARYLLIS *longifolia* to be BRUNSVIGIA *falcata* (the subject of that article), and the present species to have been erroneously put in its place by succeeding writers. The substitute having however circulated by the title of the true one in the Hortus Kewensis, Sertum Anglicanum of L'Heritier, Icones rariorum Plantarum of Jacquin, and all succeeding botanical systems, the true plant proving, besides, reducible to a different genus from AMARYLLIS; we have deemed it the best correction of the error, to restore the mutual synonyms to their respective species, without transposing a specific name by which one plant had been forgotten and another become universally known.

Whether our plant is a modification of the species for which we give it, or founds another, the safest course in all such ambiguous relations still seems to us to be, to deposit, while the confirmation of experience is awaited, the objects under a same specific head, noting each apart and duly expressing their mutual differences. The record of their existence is thus distinctly preserved in the system, while the risk of adding to the mass of iterated and fallacious species is diminished.

The figure was drawn from a flower produced by a bulb brought by Mr. Burchell from South Africa; and found in a tract of country till then untraversed by any European. Mr. Burchell's memorandum concerning the plant is in the following words: "I met with it in large bunches on the "banks of the Nu-gariep or Black-river, at the place which "I have distinguished in my map by the words 'Amaryllis "Station,' in lat. 29° 30′ S. and long. 24° 48′ E. It grows "in situations similar to those occupied by the Common "Yellow Flag (IRIS *Pseud-Acorus)* along the rivers of this "country, and is frequently under water whenever the river "rises a little above its ordinary level."

The present is the smallest of the three presumptive varieties already comprehended under this specific head; of which having already treated generally in the 303d article of this publication, we shall refer to that place.

NOTE.

In the 2121st article of Curtis's Botanical Magazine (page 6), it is asserted by Mr. Herbert, that the plant figured in the 1178th plate of that work (for the annexed account of which we are responsible) is not AMARYLLIS *revoluta*, for which we have given it, but AMARYLLIS *longifolia*; and that he knows the fact by having seen the very plant from which the drawing was taken at Mr. Woodford's. An assertion certainly grounded in error, the plant from which that drawing was done being clearly the AMARYLLIS *revoluta* of the Hortus Kewensis and L'Heritier, the prototype sample of which is preserved in the Banksian Herbarium, where we compared our plant when we gave that account. It differs from *longifolia* by having a tube shorter, instead of longer, than the limb. There is also a drawing of the Kew plant by Mr. Bauer in the Banksian Museum, now the property of Mr. Brown, and with this we also compared it. The corolla is seldom conspicuously revolute except in weakly flowered samples, or when the flower is fading. The very plant from which the drawing was made, or else one of its offsets, is now in the possession of Mr. Griffin, at South Lambeth. Whether it is Mr. Herbert's *revoluta* or not, we do not pretend to know, but are clear it is of the species intended by the propounders.

The subjoined Synopsis of the first section of *Amaryllideæ* is somewhat fuller that we formerly offered in the Second Volume of the "Journal of "Science and the Arts."

Synopsis generum sectionis primæ Amaryllidearum.

Calostemma. *Germen* uniloculare.

Pancratium. *Corona* filamentorum connectilis.

Eucrosia. *Stamina* exserta declinata; *corona* filamentorum connectilis sinû profundo ad latus superius interrupta.

Narcissus. *Filamenta* libera intra tubum corollæ inserta, *coronâ* inclusa.

Sternbergia *. *Semina* strophiolata.

Amaryllis. *Limbus* turbinato-patens. *Filamenta* libera summo tubo infra faucem inserta.

Griffinia. *Stamen* unum assurgens, cætera declinata: *semina* ventricosa *integumento* exteriore ad ventrem longitudinalitèr incrassato.

Brunsvigia. *Capsula* cum pedicello clavatìm continua; triquetra lobis compressis, oligosperma.

Cyrtanthus. *Corolla* clavato-infundibuliformis limbo breviore fauce; *filamenta* fauci supra tubum inserta.

Crinum. *Corolla* hypocrateriformis limbo regulari.

Hæmanthus. *Capsula* baccata, loculis monospermis. *(Ovula germinis nunc summo angulo loculamenti singuli annexa).*

Strumaria. *Stylus* v. strumosus v. strictissimus cæterisque sectionis ordinalis crassior.

Leucojum. *Antheræ* apice dehiscentes.

Galanthus. *Corollæ* laciniis petalodibus tribus alternis difformibus.

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* Comprising the first section of Amaryllis, as combined by us in a review of that genus in the Second Volume of the Journal of Science and the Arts.

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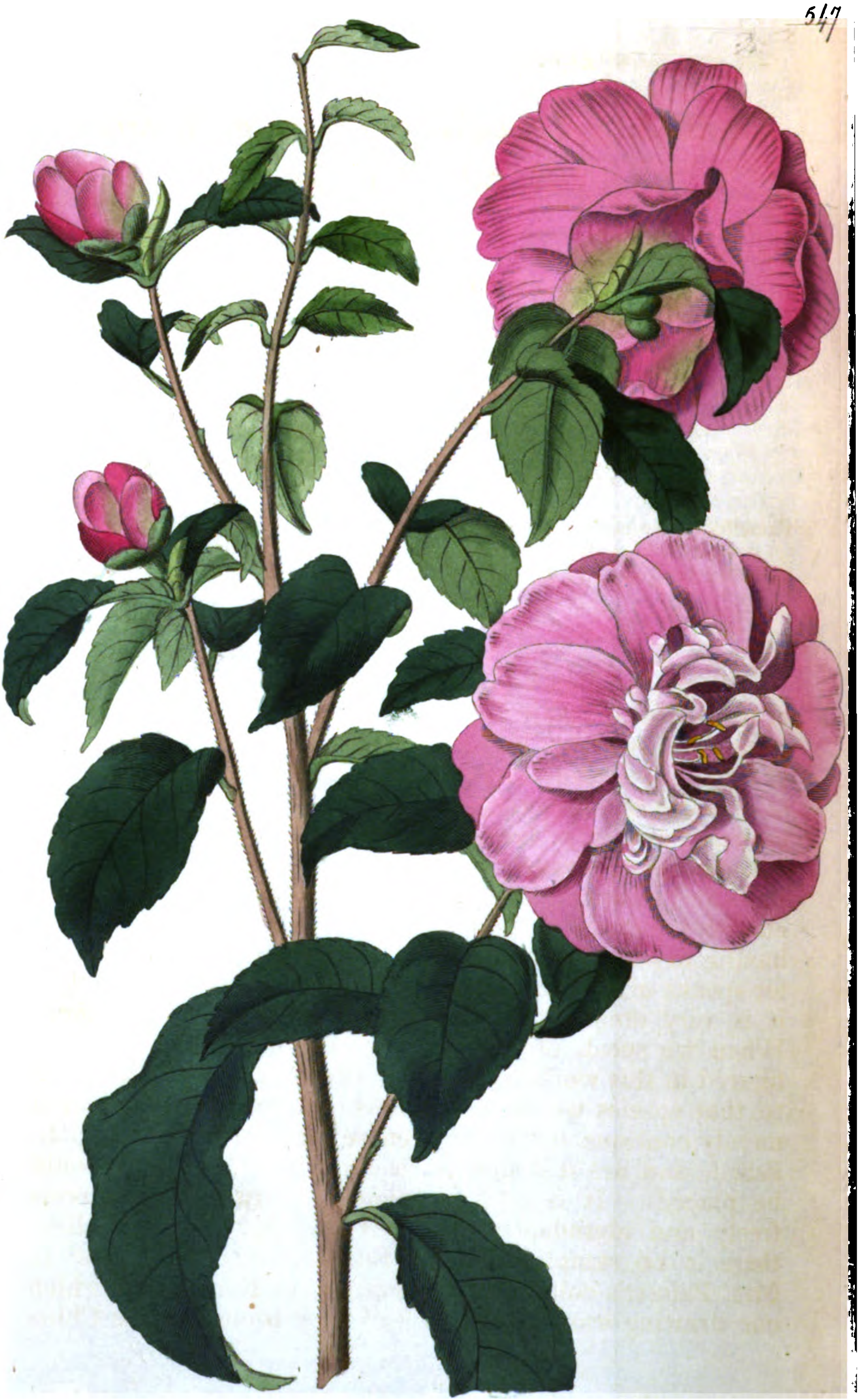


M. Hart. del. Pub by J. Ridgway 170 Piccadilly June.1.1821. J. Watts. sc.

CAMELLIA Sasanqua; *β. stricta : fl. pl. carneo.*

Mrs. Palmer's Camellia.

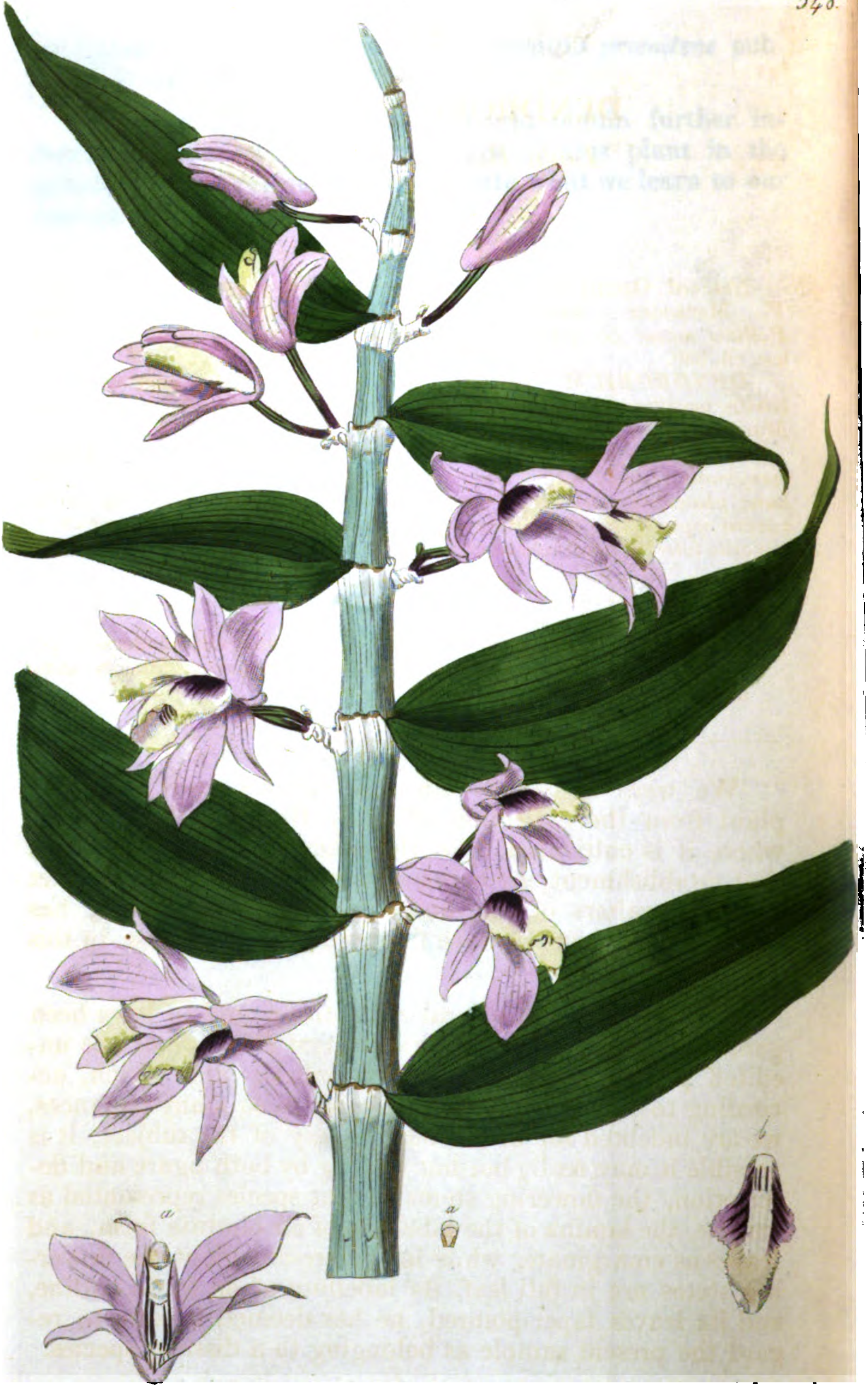
MONADELPHIA *POLYANDRIA.*

Nat. ord. AURANTIA. *Jussieu gen.* 262. *Div. III.* Fructus polyspermus capsularis. Folia non punctata. Genera AURANTIIS et MELIIS affinia.
CAMELLIEÆ. *Decand. theor. ed.* 1. 214.
THEACEÆ. *Mirbel in nouv. bullet.* 3. 382.

Camellia Sasanqua. *Vide suprà vol.* 1. *fol.* 12.
(*β*) *stricta;* ramis calycibusque lanuginosis; floribus plenis carneis.
Camellia Sasanqua; *β*; *flore incarnato multiplici. Curtis's magaz.* 2080.

The plant being known to us only in the imperfect state of a double or rather full flower; we can scarcely form a conjecture, whether it is a distinct species or a mere variety of some one already known. It seems to differ from *japonica* in being altogether smaller, and in having the upper branches and calyx furnished with a fine downy fur; it differs also from *Sasanqua* in the habit of growth, which is rigid and compact, and not productive of long twiggy recumbent branches, and as Mr. Sweet observes, in not having in any way the outward port of that species. Kempfer speaks of his *Sasanqua* as having red flowers, but then it is very doubtful to what species his plant may belong. When we speak of *Sasanqua,* we mean the plant already figured in this work (vol. 1. fol. 12) under that name; and to that species we do not believe our plant belongs; and merely continue the name because we find it already published, and are still unable to say where the plant should be placed. It is a very beautiful shrub, and flowers freely and abundantly in April and May. We believe there is no sample of it in Europe, except the one in Mrs. Palmer's collection at Bromley, in Kent, from which our drawing was taken. It had been brought from China by Captain Rawes, along with the PRIMULA *prænitens* published in the preceding fasciculus.

If we at any future period should obtain further information concerning the true place of this plant in the genus, we shall carefully communicate what we learn to our readers.



M. Hart del. Pub by J. Ridgway 170 Piccadilly June 1. 1821. [illegible]

DENDROBIUM cucullatum.

Lady Banks's Dendrobium.

GYNANDRIA *MONANDRIA.*

Nat. ord. ORCHIDEÆ. *Jussieu gen.* 64. *Brown prod.* 1. 309. *Sect. V.* Monandræ. *Anthera* terminalis, mobilis, operculiformis, decidua. *Pollinis massæ* cereaceæ, læves. *Parasiticæ, paucæ Terrestres.* Brown loc. cit. 330.

DENDROBIUM. Labellum ecalcaratum, articulatum cum apice processûs unguiformis, cujus lateribus petala antica adnata, calcar emulantia. *Massæ pollinis* 4, parallelæ. *Brown in Hort. Kew. ed.* 2. 5. 212.

OBS. *Genus forsan dividendum. Species enim labello postico (floribus resupinatis secund. Auct.) aliquantulum differunt structurâ antheræ. Ad hanc phalangem ferè omnes species Novæ Hollandiæ pertinent, in quibus racemi oppositifolii, nec axillares vel verè terminales sed instar ramorum ex opposito latere articuli caulini orti.* Brown prod. 1. 332.

D. *cucullatum*, caulibus pendulis, foliis bifariis lanceolatis acuminatis, pedunculis oppositifoliis subbifloris, labello indiviso circumscriptione ovato basi cucullato. *Brown MSS.*

We were favoured with this curious and handsome plant from the collection of Lady Banks at Springrove; where it is cultivated, like the other tropical parasites of that establishment, by being suspended in a wicker basket from the rafters of the hothouse; and, we believe, has never been known to have flowered any where else in this country.

It is said to be in several collections, and to have been generally conceived to be DENDROBIUM *Pierardi* of the unedited part of Roxburgh's Flora Indica; and which, according to Mr. Brown, to whom, as in so many instances, we are indebted for all we have to say of the subject, it is possible it may really be; but finding by both figure and description, the flowering stems of that species represented as leafless, the lamina of the labellum of an obovate form, and leaves as emarginate, while in the present plant the flowering stems are in full leaf, its labellum of an ovate outline, and its leaves taper-pointed, he has deemed it safer to regard the present sample as belonging to a distinct species.

Dendrobium ranks in Mr. Brown's fifth section of *Orchideæ*, distinguished by "a terminal moveable lidshaped deciduous anther; *pollen-masses* of a waxen consistence and smooth surface; and by its species being nearly all parasitical." In the sectional group, the genus is marked by the same author, as having "a spurless label connected by a joint with the top of the unguislike process, to the sides of which the front-petals are attached in such way as to afford the appearance of a true orchideous spur; and 4 parallel *pollen-masses*." *Cucullatum* is specifically distinguished by Mr. Brown, "as having loosely hanging stems, lanceolate taper-pointed leaves disposed in two ranks, peduncles placed opposite to the leaves, and generally 2-flowered, and an undivided label with an ovate outline and cowled base."

The stem of our plant had been tied up to a garden stick for support on its removal to London, and in this position it is shown by our draughtsman; but when growing naturally in its station on the trunks or branches of the vegetables it affects in its native India, the stems are said to hang loosely down.

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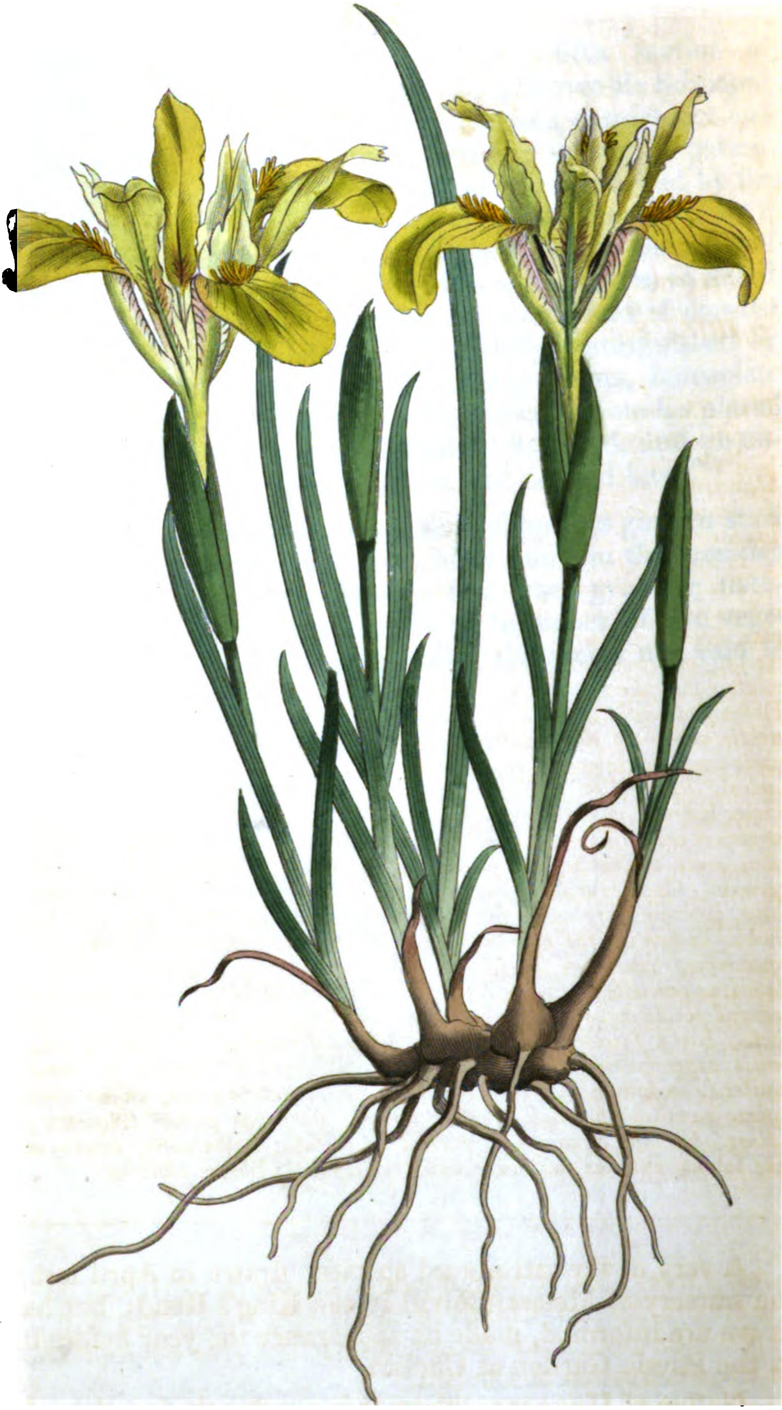

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IRIS arenaria.

Hungarian Sand-flag.

TRIANDRIA *MONOGYNIA.*

Nat. ord. Ensatæ. *Lin. ord. nat. VI. Nobis in ann. of bot.* 1. 219. Irides. *Jussieu gen.* 57. Irideæ. *Brown prod.* 1. 302.
IRIS. Suprà vol. 3. *fol.* 246.

Div. *Rhizoma elongatum crassum solidum horizontale, rariùs caudescens: folia ensiformia, collaterali-disticha.* Subdiv. *Barbatæ v. subbarbatæ.* Nob. suprà vol. 5. in append.

I. *arenaria*, foliis scapo brevissimo bifloro longioribus, flore superiore abortiente. *Kitaib. et Waldst. pl. rar. hung.* 1. 57. *t.* 57.

Iris arenaria. *Vahl enum.* 2. 134. *Willd. enum.* 1. 62. *Nobis suprà vol.* 5. *in append. fol.* 1. *vers. Redouté liliac.* 296.

Rhizoma *horizontale, secundùm latus superius multiceps.* Scapus *sesqui v. biuncialis, pennam corvinam v. circitèr crassus, teres, nitidus, viridis, simplex, brevior foliis.* Folia *pauca, angusta, lineari-ensata, obsoletè nervosa, erecta, subtriuncialia, pallidè virentia.* Spatha 3-*valvis, herbacea, convoluto-conduplicata, lanceolata, lævis, biflora, valvâ interiore apice fissâ.* Flores *pedunculati, pallidè flavi, odorem strenuum haud ingratum spirantes, erecti, cum tubo simul sumti subsesquiunciam longi, primarius effœtus v. semina non perficiens, alter, postridie v. seriùs evolvendus, fertilis:* pedunculi *inclusi, longitudine ferè germinis atque tubi.* Germ. *inclusum, viride,* ⅓ *unciæ longum, cum tubo corollæ æquabilitèr continuum, oblongum, pennam corvinam crassitie parùm excedens, rotundatè 3-gonum, faciebus interàngulàribus costâ saturatiore vix prominulâ percursis; loculamenta biseriato-polysperma.* Cor. *infundibuliformis:* tubus *inclusus, pallidè virescens, cuniculatus, pennam corvinam crassus, infernè versùs subattenuatus, 3plo brevior limbo:* limbus *infernè turbinato-divergens, supernè recurvato-patens,* laciniæ *æquilongæ,* exteriores 3 *barbatæ,* ¼ *circa latiores,* ⅓ *unciæ v. circa latæ flavedine pauxillò intensiore lutescentes, cuneato-oblongæ, ungue cum laminâ recurvâ retusâ æquabilitèr continuo et venis atque punctis purpureis ad latera picto; barba fasciata flava angusta pilis inferioribus (ob pollinis cinerascentis aspersionem?) fusco apiculatis;* interiores 3 *angustiores, cuneato-ligulatæ, undulatæ, supernè recurvæ, apice crenulato-erosæ, ungue angusto, inflexo-canaliculato, 3plo breviore laminâ, purpureo picto.* Stigmata *pallidiora, barbam æquantia, segmentis lanceolatis, acuminatis, erecto-recurvis;* labium exterius *membranaceum brevissimum glabrum albicans.*

A very newly introduced species; drawn in April last at the nursery of Messrs. Colvill in the King's Road; but had, as we are informed, made its appearance the year before last in the Physic Garden at Chelsea.

Native of Hungary, where it is constantly found in dry sandy places. Differs from *pumila* by being smaller in all

the parts, and in having a primary flower, the fruit of which miscarries, while that of the secondary flower comes to perfection; in regard to this character indeed, as far as we have seen, it differs from the whole genus. *Flavissima*, the nearest akin, is found constantly to affect springy moist places, flowers later in the year, and has a scape higher than the leaves. *Lutescens*, also very close to our plant, is much larger, with a proportionately longer scape. The four are very like, but still evidently distinct in port and economy, besides the above technical marks.

Arenaria, we believe, will prove quite hardy; though the present sample had been sheltered in the winter.

Rootstock horizontal, many-budded along the upper side. *Scape* 1½ to 2 inches high, rather thicker than a crow-quill, round, shining, green, simple, shorter than the leaves. *Leaves* few, narrow, linearly ensiform, faintly nerved, upright, about 3 inches long, lightish green. *Spathe* 3-valved, 2-flowered, herbaceous, convolutely folded, lanceolate, smooth, inner valve cleft at the top. *Flowers* light yellow, peduncled, strongly but not disagreeably scented, upright, with the tube about an inch and a half deep, the first barren, the second fertile: *peduncles* enclosed, nearly the length of the germen and tube. *Germen* enclosed, green, ⅓ of an inch long, evenly continuous with the tube of the corolla, oblong, a little thicker than a crow-quill, roundedly 3-cornered, the intervening facets marked by a deeper green scarcely raised rib; cells with many ovula in two rows. *Corolla* funnelform: *tube* enclosed, pale green, piped, about the thickness of a crow-quill, slightly tapered downwards, 3 times shorter than the limb: *limb* turbinately divergent at the lower part, spreading and recurved at the upper, segments of one length, 3 *outer ones* bearded, about ¼ broader, about ⅓ of an inch wide, of rather a deeper yellow than the others, cuneately oblong, unguis evenly continuous with the recurved retuse lamina and marked on each side with purple veins, *beard* a narrow strip of deep yellow hairs; *inner ones* narrower, cuneately ligulate, waved, recurved at the upper part, crenulately eroded at the top, unguis narrow, inflectedly channelled, 3 times shorter than the lamina stained with purple. *Stigmas* paler, about the length of the bearded part of the segment, segments lanceolate, taper-pointed, uprightly recurved: *outer lip* membranous, short, smooth, white, truncate.

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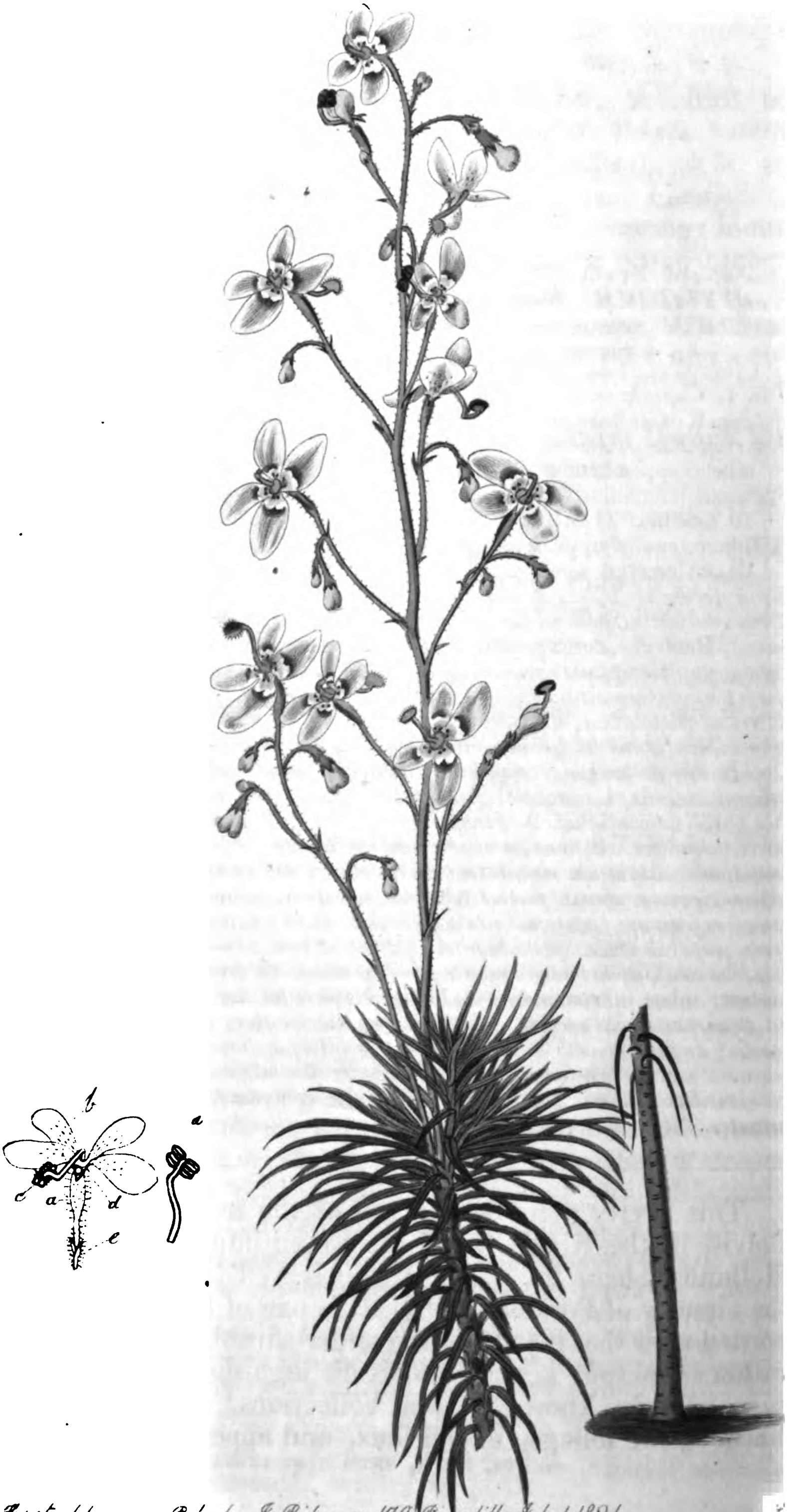

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STYLIDIUM laricifolium.

Fine-leaved Stylidium.

GYNANDRIA *MONOGYNIA.*

Nat. ord. STYLIDEÆ. *Brown prod.* 1. 565.
STYLIDIUM. *Suprà vol.* 1. *fol.* 90.

Div. I. *Capsula ventricosa, subovata, nunc sphærica v. oblonga.* Brown.
Subdiv. E. *Caulis suffruticosus, foliis sparsis, crebris.* Brown.
S. *laricifolium*, foliis setaceo-linearibus sessilibus pilosiusculis, fauce nudâ, labello appendiculato. *Brown prod.* 1. 570; (*sub* S. tenuifolio).
Stylidium laricifolium. *Persoon syn.* 2. 210. *Jussieu in ann. du muséum.* 18. 19. *tab.* 3.
Stylidium tenuifolium. *Brown prod.* 1. 570.

Caulis *erectus, teres, pennâ corvinâ crassior, infrà nudus cicatrizatus, suprà foliosus:* fol. *crebra undique sparsa, recurvo-patentia, subuncialia, lineari-subulata, nudiuscula, canaliculata lateribus recurvulis, subtùs carinata.* Paniculæ *decomposita, terminalis, altior caule, gracilis, elastico-rigens, capitato-pilosa,* racemulis *distantibus, divisis vel simplicibus, paucifloris;* bracteæ *ovali-oblongæ, parvulæ, appressæ.* Germ. *viride, oblongum, deorsùm attenuatum, ut calyx et corolla (extùs), capitato-pubescens.* Cal. *cum eo continuus at brevior, herbaceus, erectus, segmentis oblongis obtusis.* Cor. *carneo-pallescens, resupinata,* limbo *bilaterali-expanso, semunciâ parùm latiore, laciniis 4 inæquilateri-oblongis obtusis, per paria inæqualia opposita parallelo-contiguis, 2 (resupinatione) anticis 2 posticis ferè duplo minoribus, omnibus aliquantùm supra* faucem *nudam atque punctis 2 didymis sanguineis insignitam maculâ subsemicirculari purpureâ areolam lunulatam albam circumscribente pictis:* labellum *minutum, anticum, limbo depressius atque refractum, ovatum, acutulum cum disco crasso convexo albido nitente, supernè orâ angustâ tenuiore purpureâ pruinoso-denticulatâ marginatum,* lacinulâ *divaricatâ sanguineâ tenui subulatâ brevi ad basin utrinque alatum:* tubus *plurimùm brevior limbo, bis ferè longior calyce, intùs glaber, ad flexuram labelli incisus.* Columna *corollâ longior, viridi-rufescens, irritabilis;* capitellum *sub antheras virescens pilisque diaphanis articulatis subtensum;* anth. *rubro-fuscæ,* polline *luteo-virente:* stigma *viride, transversum, recedentibus antheris manifestum:* glandulæ epigynæ 2 *oppositæ styli basi astantes.*

This pretty plant was raised at the nursery of Messrs. Colvill in the King's Road, from seed imported from New Holland, where the species was observed by Mr. Brown in the vicinity of Port Jackson. It is one of the only two recorded ones that belong to the under-shrubby section of this rather numerous genus; and is distinguished from *fruticosum,* already known in our collections, by a subulately linear sessile foliage, naked faux, and appendanted label.

Belongs to the greenhouse, where it flowers in May.

The following critical view of the order is borrowed from Mr. Brown.

"*Stylideæ*. This order, consisting of STYLIDIUM, LEVENHOOKIA, and FORSTERA, I have formerly separated from *Campanulaceæ*, on account of its reduced number of stamina, and the remarkable and intimate cohesion of their filaments with the style, through the whole length of both organs. It differs also both from *Campanulaceæ* and *Goodenoviæ* in the imbricate æstivation of the corolla, and where its segments are unequal in the nature of the irregularity. In the relation which the parts of its flower have to the axis of the inflorescence, and in the parallel septum of its capsule, it agrees with *Goodenoviæ* and differs from LOBELIA, which, however, in some other respects it more nearly resembles."

"Very different descriptions of the stamens and pistil in this tribe, and especially of the latter, have been given by several French botanists. According to Richard the lateral appendices of the labellum in STYLIDIUM are the real stigmata, the style being consequently considered as cohering with the tube of the corolla, and the column as consisting of stamina only. This view of the structure demands particular notice, not only from the respect to which its author is himself entitled, but because it has also been adopted by Jussieu, whose arguments in support of it, and against the common opinion, may be reduced to three. 1st, Were the common opinion admitted, the difficulty of conceiving so wide a difference in what he terms insertion of Stamina, in two orders so nearly related as *Campanulaceæ* and *Stylideæ* obviously are: 2dly. The alleged non-existence of the stigma, which preceding authors had described as terminating the column: and lastly the manifest existence of another part, which, both from its appearance and supposed origin, is considered as capable of performing the function of that organ."

"In opposition to these arguments it may be observed, that the real origin of the Stamina is in both orders the same, the apparent difference arising simply from their accretion to the style in *Stylideæ*, a tendency to which may be said to exist in LOBELIA. The inability to detect the Stigma terminating the column in STYLIDIUM must have arisen from the imperfection of the specimens examined, for in the recent state, in which this organ is even more obvious than in *Goodenoviæ* at the time of bursting of the antheræ, it could not have escaped so accurate an observer as Richard; and were it even less manifest in STYLIDIUM, its existence would be sufficiently confirmed from the strict analogy of that genus with LEVENHOOKIA, whose stigma, also terminating the column, consists of two long capillary laciniæ, which are in no stage concealed by the antheræ."

"With respect to the part considered as Stigma by Richard, I have formerly observed that it is obsolete in some species of STYLIDIUM, and entirely wanting in others, and there is certainly no trace of any thing analogous to it in FORSTERA."

"The greater part of the Australian *Stylideæ* exist at the western extremity of the principal parallel, several species are found at the Eastern extremity of the same parallel, and a few others occur both within the tropic and in Van Diemen's Island. Beyond Terra Australis very few plants of this order have been observed; two species of STYLIDIUM, very similar to certain intratropical species of New Holland, were found in Ceylon and Malacca by Kœnig; and of the only two known species of FORSTERA, one is a native of New Zealand, the other of Tierra del Fuego, and the opposite coast of Patagonia." *Brown gen. rem. in append. to Flind. voy.* 2. 561.

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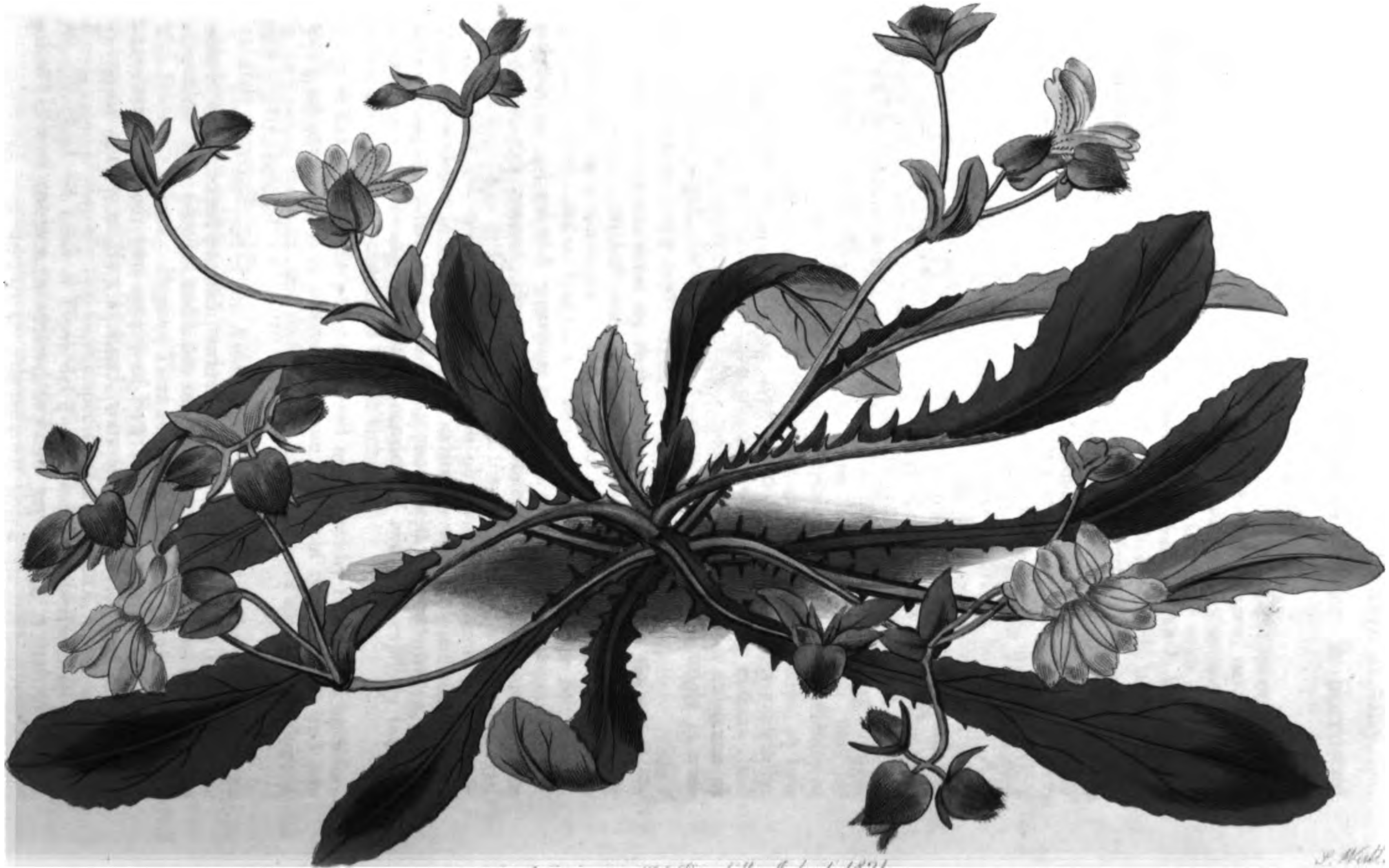

M. Hart sc.

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F. Watt.

VELLEIA lyrata.

Lyrate-leaved Velleia.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CAMPANULACEÆ. *Jussieu gen.* 165. *Div. I.* Antheræ distinctæ.

GOODENOVIÆ. *Brown prod.* 1. 573. *Sect. I.* Semina indefinita.

VELLEIA. Cal. inferus, 3-5-phyllus, inæqualis. *Corolla tubo* basi germini accreto, apice hinc fisso; *limbo* bilabiato. *Antheræ* distinctæ. *Stylus* indivisus. *Glandula epigyna* inter filamenta 2 anteriora. *Capsula* basi biloculari, valvis bipartitis. *Semina* imbricata, compressa.

Herbæ *acaules.* Folia *radicalia subspathulata; sæpiùs dentata, nunc lyrata.* Scapi *dichotomi, axillis plerisque floriferis, bracteis oppositis, foliaceis, quandoque maximis et nunc connatis.* Calycis *foliolum superius latius, et basi sæpè dentatum.* Corolla *flava, basi adhærenti infrà gibbâ v. calcaratâ.* Stylus *subtetragonus.* Stigmatis *indusium maximum.* Brown prod. 1. 580.

Sect. II.—Calyx 3-*phyllus.* Corolla *basi hinc gibbosiuscula.* Velleiæ veræ. *Brown prod.* 1. 580.

V. *lyrata,* glabra, bracteis dichotomiarum distinctis, foliis lyratis basive inciso-dentatis, calycis foliolis ovato-orbiculatis. *Brown loc. cit.*

Velleia spathulata. *Jussieu in ann. du muséum* 18. 17. *t.* 1. *fig.* 4; *(non Brownei in loc. cit. pro quâ tamen à Jussieuio malè habetur).*

A species now first introduced by Mr. Lee into the Hammersmith nursery, where the drawing was taken from a plant in one of the greenhouses. It is the only one of the genus that has appeared in our gardens; and was originally observed by Mr. Brown in New Holland, growing in the neighbourhood of Port Jackson. Flowers in April.

The species has been mistaken by Messrs. Jussieu and Richard, in the Annales du Museum, for *spathulata* of the Prodromus of New Holland; one belonging to a far distant quarter of that country, and as Mr. Brown thinks very unlikely to have come into the possession of those celebrated Botanists.

To observe the original form of the stigma with its surrounding indusium which is the main feature of this natural order, that organ must be inspected at a very early stage of its appearance, and long before the flower expands. It subsequently assumes a very different appearance, owing to a change in the form of the *indusium* or membranous appendage which shrouds it.

The present genus consists of stemless herbaceous plants with a radical subspatulate foliage, yellow flowers and an indusium of the largest dimensions.

We shall introduce in this place some instructive remarks by Mr. Brown.

" I have elsewhere observed, that in two genera of *Good*
" *enoviæ*, namely, EUTHALES and VELLEIA, the base of the
" corolla coheres with the germen while the calyx remains
" entirely distinct. This structure I had stated as being
" peculiar to these genera, and as in some degree invali-
" dating one of Jussieu's arguments for considering the floral
" envelope of Monocotyledones as calyx rather than corolla.
" The fact, however, seems not to be admitted by Richard,
" who in a dissertation already quoted describes what has
" hitherto been called calyx in VELLEIA as bracteæ: a view
" of the structure which in those species of that genus having
" triphyllous calyx, may appear plausible, but of which the
" probability is diminished even in those with pentaphyllous
" calyx, and still more in EUTHALES, where the calyx is also
" tubular. But a stronger argument for the part usually
" denominated calyx being in these genera really such, may
" be derived from certain species of *Goodenia*, in which it
" will be admitted that both calyx and corolla are present,
" and where, though both these envelopes adhere to the
" germen, they may be separately traced to its base; the
" coloured corolla being plainly visible in the interstices of
" the foliaceous calyx."

" *Goodenoviæ*, whose maximum exists in the principal
" parallel of New Holland, are nearly, but not absolutely
" confined to Terra Australis; the only known exceptions
" to this consist of the genus CYPHIA, which is peculiar to
" Africa, and chiefly occurs at the Cape of Good Hope; of
" some species of SCÆVOLA which are found within the tro-
" pics; and of GOODENOVIA *littoralis*, which is common to
" the shores of Terra Australis and New Zealand, and
" according to Cavanilles is also a native of the opposite
" coast of South America." *Brown gen. rem. in append. to Flind. voy.* 2. 560.

We have received the "*Mémoire sur la famille des Cruciferès*" by M. De Candolle, presenting an instructive and luminous statement of the principles of his new arrangement of *Cruciferæ* (corresponding with the class *Tetradynamia* of Linnæus), the family or order about to appear in the approaching volume of his "Natural System of the Vegetable Kingdom;" being the second of that vast undertaking.

The latest enumeration of *Cruciferæ*, viz. that contained in Persoon's Synopsis, gives only 504 species. M. De Candolle counts at this time no less than 970, of which he himself has inspected 880 in the sample, and dissected the seeds of more than 700.

Computing by the general distribution of this vegetable family over the globe, he seems to infer that the number of the species he is about to record, will not be found very far short of the total amount.

The discussion of the principles or the philosophy of the classification, is followed by a synoptical view of the Order, combined in 5 principal divisions *(suborders)*, 21 subdivisions *(tribes)* and 95 *genera*.

In the arrangement that has been adopted for this natural order, externally so very devoid of definable characteristics, we cannot but be struck with the importance of the resources that have been derived from the interior of the seed, especially from the relative position of the cotyledons and radicle, an ingenious device first used for the characters of the genera of this family by Mr. Brown, in the last edition of the Hortus Kewensis. *Cotyledones incumbentes* and *Cotyledones accumbentes* (convertible with *lateral radicle* and *dorsal radicle)* seem to afford the two grand divisions of the whole order; and so equally, that of the 95 genera composing the order, 48 rank in the division *Cotyledones accumbentes*, and 47 in *Cotyledones incumbentes*. We are to presume that the learned writer has obtained these curious results by satisfactory investigation.

The "*Mémoire*" will be read with deep interest by every Botanist, and cannot fail to increase the admiration already inspired by the genius and zeal of its célebrated author.

CHEIRANTHUS scoparius. *Chameleon Wallflower.*

From an incidental remark, in relation to the curious transitions of colour in the corolla of some species of CHEIRANTHUS, in the above "*Mémoire,*" we perceive that the "*Chameleon Wallflower,*" published in our Register (vol. 3. fol. 219), as a possible, though extraordinary variety of CHEIRANTHUS *Cheiri,* had in fact been already specifically installed in the system; but under a designation much too brief and indefinite for our powers of discrimination, until aided by the remark above alluded to. The plant belongs, without doubt, to CHEIRANTHUS *scoparius* of the 2d vol. p. 681 of Willdenow's Enumeratio Horti Regii Berolinensis; distinguished from the Wild Common Wallflower (specifically removed from *Cheiri,* the garden sort, under the title *fruticulosus)* by a *strigose* pubescence. *Strigose* is however an epithet that we should never have thought of applying to such fur as covers this plant, at least in the state we see it in our gardens.

C. *scoparius* is said to have been originally observed in the Island of Teneriffe, by M. Broussonnet. It has been cultivated in the Royal Garden at Berlin for these ten years past or more; and we find that it was from thence that the plant was introduced amongst us, not from Moscow, as we had been informed. It is now becoming very common; being nearly hardy and very easily propagated by cuttings and seed. We shall mention the subject again in the appendix of the present volume.

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S. Watts. sc.

AMARYLLIS purpurea; β: *minor*.

Lesser Purple-flowered Amaryllis.

HEXANDRIA *MONOGYNIA*.

Nat. ord. NARCISSI. *Jussieu gen.* 54. *Div. II.*
AMARYLLIDEÆ. *Brown prod.* 1. 296. *Sect. I*
AMARYLLIS. Suprà vol. 3. *fol.* 226.

Div. V. Bi-multifloræ. Tubus nudus. Folia bifaria.

A. *purpurea*, corollæ limbo erecto, rotato-turbinato, subobliquo; tubo faucem membranaceo-duplicatam æquante: staminibus erecto-distantibus, incurvescenti-patentibus. *Nob. in journ. of science and the arts.* 2. 360.

Amaryllis purpurea. *Hort. Kew.* 1. 417. *ed.* 2. 2. 224. *Willd. sp. pl.* 2. 53. *Nob. in curtis's magaz.* 1430.

Amaryllis elata. *Jacq. hort. schœnb.* 1. 32. *t.* 62.

Amaryllis speciosa. *L'Heritier sert. angl.* 12.

Crinum speciosum. *Lin. suppl.* 195. *Thunb. prod.* 59.

(α) *major;* coccineo-rubens, fauce hyalino-fenestratâ; antheris longioribus. *Nob. in journ. of science and the arts.* 2. 360.

Amaryllis purpurea. *Curtis's magaz. l. c.*

(β) *minor;* cerasino-rubens, fauce opaco-fenestratâ; antheris brevioribus. *Nob. in journ. of science and the arts. l. c.*

Bulbus *oblongo-ovatus.* Folia *interiora altiora,* scapum *compresso-cylindraceum 2-3-pedalem subæquantia.* Spatha *pedunculis flore bis terve brevioribus longior.* Cor. 3-4-*uncialis, infundibuliformis, recta:* tubus *rotundato-trigonus;* faux *latè turbinata, intùs membranâ ad laciniarum divisuras sexdentatâ accreto-duplicata;* limbus *isti subæqualis, obsoletè irregularis, laciniis reticulato-rugulosis, extimis rhombeo-ovatis acutulis, intimis ovali-lanceolatis ⅓ angustioribus.* Fil. *inclusa, alternè subbreviora:* anth. *verticalitèr appensæ versatiles:* pollen *luteum.* Stylus *inclinatus;* stigmata *obsoletè trina.* Germ. *oblongum viride.* Semina *paleaceo-compressa, alâ latâ membranaceâ, nucleo parvo compresso.* Nob. loc. cit.

Introduced by Mr. Masson from the Cape of Good Hope in 1774.

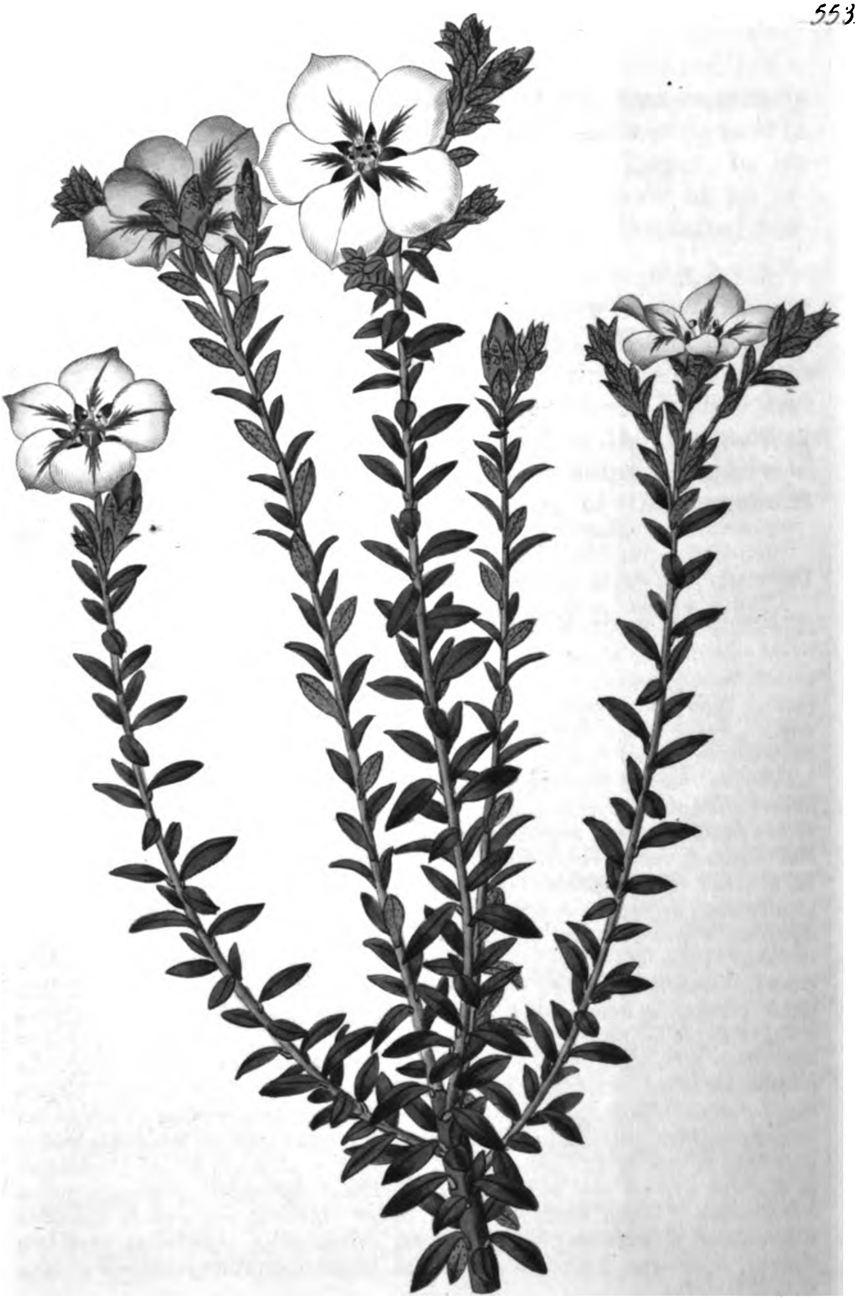
α, the large variety, has a flower nearly twice the size of that in β, the present plant, with a deeper poppy-red corolla, and is very scarce in our collections. α differs moreover from β, in having the webbed intervals which connect the lower parts of the segments at the faux transparent, instead of opaque, as well as by far longer anthers.

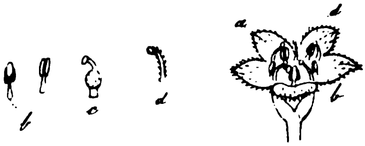
Our drawing was taken in the hothouse of the nursery of Messrs. Colvill, in the King's Road, Chelsea.

β is the variety from which the species was originally taken up in the Hortus Kewensis; and is the one figured in Jacquin's work, as well as by Mr. Francis Bauer, in his Sketches in the Banksian Museum. We know of no representation of α, except the one in Curtis's Botanical Magazine by Mr. Sydenham Edwards.

The species approaches nearer to PANCRATIUM than any other of its natural order from the Cape of Good Hope or adjoining regions, where the type of that genus seems wholly unrepresented. The membrane which is detached from the faux in PANCRATIUM, and forms the connecting web between the stamens, in this plant adheres closely to the corolla, and connects the portion of the segments which constitute the faux.

Requires to be kept in the hothouse, where it flowers freely; and is becoming pretty common in the nurseries about London.





S. Hart. del. Pub. by J. Ridgway 170 Piccadilly July 1.1821. S. Watts sc.

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DIOSMA amœna.

Circular-petalled Diosma.

PENTANDRIA *MONOGYNIA.*

Nat. ord. RUTACEÆ. *Jussieu gen.* 269. *Div. III.* Genera Rutaceis affinia.
DIOSMEÆ. *Brown gen. rem. in Flind. voy.* 2. 545.
DIOSMA. *Suprà vol.* 5. *fol.* 366.

Div. Adenandra. *Stamina basi coronâ brevi connexa: 5 alterna sterilia: 5 fertilia apice appendiculata.* Willd. enum. 1. 256.

D. *amœna*, foliis ovalibus glabris, petiolis eglandulosis, floribus sessilibus ramorum umbellato-proliferorum seorsìm terminalibus; petalorum laminis imbricatis orbiculatis cum mucrone margineque lævi.

Diosma amœna. *Loddiges's bot. cab. n.* 161.

Frutex *erectus, prolifero-ramosus;* rami *plurimi, axillares, per intervalla approximati, adscendentes, teretes, villosi, floribus tenùs foliosi, apice prolifero-ramulosi,* ramulis *pluribus brevibus, foliosis, successivè unifloriferis, umbellato-approximatis.* Folia *coriacea, crassiuscula, crebra, sparsa, patentia, intervallis longiora, elliptica, utrinque attenuata, obtusiuscula, ½ unciæ circitèr longa latitudine duplo minore v. ultrà, nuda, opaca, enervia, disco subtus glauca cum orâ glanduloso-punctatâ costâque mediâ obsoletâ subtus virente,* floralia 2 *opposita calyci subtensa subovata acutiora ciliata:* pet. *lineari-oblongus, appressus, decurrens, multotiès brevior folio, intùs planus.* Flores *sessiles, erecti, roseo-albicantes, inodori, unciam circà transversi, turbinato-rotati, subtùs rubro-lucentes.* Cal. *turbinato-patens, foliis (2 floralibus proximioribus oppositis) obvallatus, corollâ bis terve brevior, punctatus, viridi-ruber, segmentis ovatis ciliatis acumine brevi obtusiusculo.* Cor. pet. *æqualia, unguiculato-orbiculata cum mucrone, margine lævi, plicâ mediâ verticali;* laminis *imbricato-contiguis;* unguibus *angustis, subulatis, rubris, erectis, distantibus, ter ferè brevioribus calyce.* Stam. *coronæ crassiori 5-lobæ viridi germen æquanti insistentia, erecta, distantia, pilosa:* fil. 5 alterna castrata *duplo longiora, petalis opposita, subulato-filiformia, apice rubro et* appendicis *lutescentis cerini rudimento introrso terminata;* alia 5 antherifera *crassius subulata, erecto-incurvescentia, antheris vix æqualia;* anth. *majusculæ introrsæ, oblongæ, ustulato-rufescentes, supra basin receptaculi lati antici loculorum affixæ,* appendice *ovato-rotundo completo cerino lutescente mobili ipsis 3plo minore extùs convexo intùs concavo cum glandulâ lucidâ prominente in disco ex arrecto post anthesin retrofrangendo articulato-præfixæ:* pollen *ochroleucum.* Germ. *ovato-rotundum viride glandulis creberrimis sessilibus stipitalisque pustulatum:* stylus *viridis, columellaris, staminibus completis æqualis, 5-striatus, è decurvo arrigendus,* stigmate *depresso penticolli viridissimo apiculatus.*

Native of the Cape of Good Hope, and said to have been introduced about 1798; though not recorded in any of the Catalogues of our gardens.

The drawing was made in the greenhouse at the nursery of Messrs. Colvill, in the King's Road, Chelsea; where it flowers freely and abundantly.

Amœna, like *uniflora, speciosa* (Glandulifolia *umbellata.* Wendl. coll. 1. 37. t. 10.), and *fragrans,* belongs to a group, which Willdenow has detached from Diosma in his "Enumeratio," and distinguished from the other three parcels into which he distributes that genus, by an appendage connected by a flexile stalk with the summit of the receptacle of the cells of the fertile anthers, and which while the anther remains entire is upright, but when that bursts bends down close along the back of the anther, and proves an unfailing sign that the pollen has been shed. The same circumstances belong to the species that Willdenow leaves for the true group, under the title Diosma, but these appendages being there minute and inconspicuous, seem to have escaped his eye. In Adenandra the filaments are more intimately connected with the receptacular crown than in Diosma.

Amœna may be known from all others of its section, with which we are acquainted, by sessile flowers orbicular imbricate petals and oval foliage. The flower is smaller than either in *uniflora* or *speciosa,* and about the size of that of *fragrans (Curtis's magaz.* 1519) which is however long-peduncled and red throughout.

Mr. Brown observes, that Ruta and Peganum may be annexed to *Diosmeæ,* but that neither genus being calculated to afford a clear idea of the order, from the general structure of which they deviate in some important points, he has derived the ordinal title from Diosma, as the most extensive and best-known genus of the division, and proposes to detach the first section of Jussieu's *Rutaceæ* as the foundation of another order, to be called *Zygophylleæ.*

Diosma is a South African genus.

In our view the Barosma, Agathosma, and Adenandra, serve better for sections of Diosma than separate genera. This is however entirely matter of taste.

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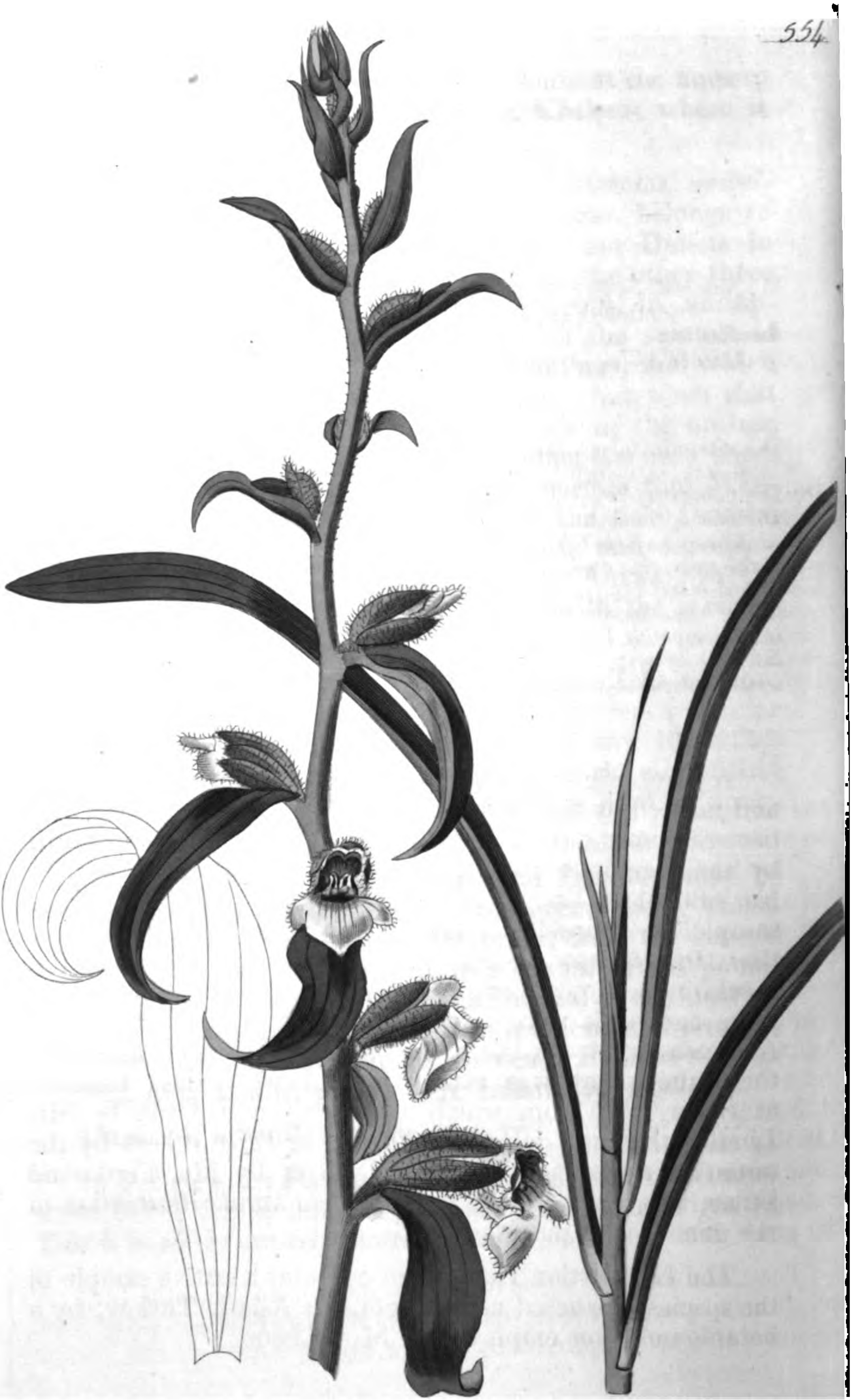

M Hart. del.   Pub by J. Ridgway 170 Piccadilly July. 1. 1821.   J. Watts. sc.

DIGITALIS orientalis.
Natolian Fox-glove.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. SCROPHULARIÆ. *Jussieu gen. Div. I.* Stamina 4 didynama.
SCROPHULARINÆ. *Brown prod.* 1. 433. *Sect. II.* Stamina 4 antherifera.
DIGITALIS. Suprà vol. 1. *fol.* 48.

D. *orientalis,* foliolis calycinis lanceolatis pubescentibus, corollæ labio inferiore maximo spathulato. *Lamarck encyc.* 2. 278.
Digitalis orientalis. *Willd. sp. pl.* 3. 286. *Ferd. Bauer digit. illustr. tab.* 13.
Digitalis orientalis tragopogi folio, flore albido. *Tournef. cor.* 9.

Caulis *sesquipedalis, gracilis, cylindraceus, foliosus, infernè glaber, supernè pubescens atque subramosus ramulis brevibus.* Folia *alterna, sessilia, lineari-lanceolata, integerrima, glabra, Tragoponis* (Salsifis) *instar.* Spica *longa laxa, terminalis:* flores *albidi, grandiusculi, pedicellati, ob limbi labium superius truncatum atque subnullum unilabiatos simulantes;* laciniæ *laterales breves;* labium inferius *magnum, planum, spathulatum, margine levitèr pubescens, non verò barbatum.* Lamarck loc. cit.

A plant originally observed by Tournefort in the Levant, and noticed by the above summary record; but afterwards brought more distinctly within the sphere of the Botanist, by the ingenious and learned Chevalier de Lamarck, in his valuable "Encyclopédie," where it is described from a sample in Tournefort's Herbarium, and distinguished by the name it now bears. From that time till lately the species was known from no other source; when about three years ago seeds were sent by Mrs. Liston, the lady of our Ambassador at the Porte, to Sir Joseph Banks, and from these the plant was raised that flowered last summer at Springrove, from which a drawing was made by Mr. Lindley that now mingles with two or three others by the same artist among the masterly ones by Mr. Ferdinand Bauer that compose the splendid and ample illustration of the genus lately published.

The Lambertian Herbarium contains a native sample of the species, gathered near Angora in Asiatic Turkey, by a botanic collector employed by Mrs. Liston.

Our drawing was made in May last, from a sample in Lady Banks's garden at Springrove; the only place, we believe, where the live plant is to be found in this country. We had no opportunity of inspecting the plant ourselves, and subjoin a description by M. de Lamarck.

Stem a foot and a half high, slender, cylindrical, leafy, smooth at the lower part, furred at the upper, where it has also some short branchlets. *Leaves* alternate, sessile, linearly lanceolate, quite entire, smooth, and very like those of the Common Salsify. *Spike* long, loose; *flowers* of a whitish colour, largish, stalked, and looking as if only one-lipped, the upper lip being foreshortened and almost reduced to none, and the side segments being short, while the lower lip is large, flat, spatulate, and slighly fringed, but not bearded.

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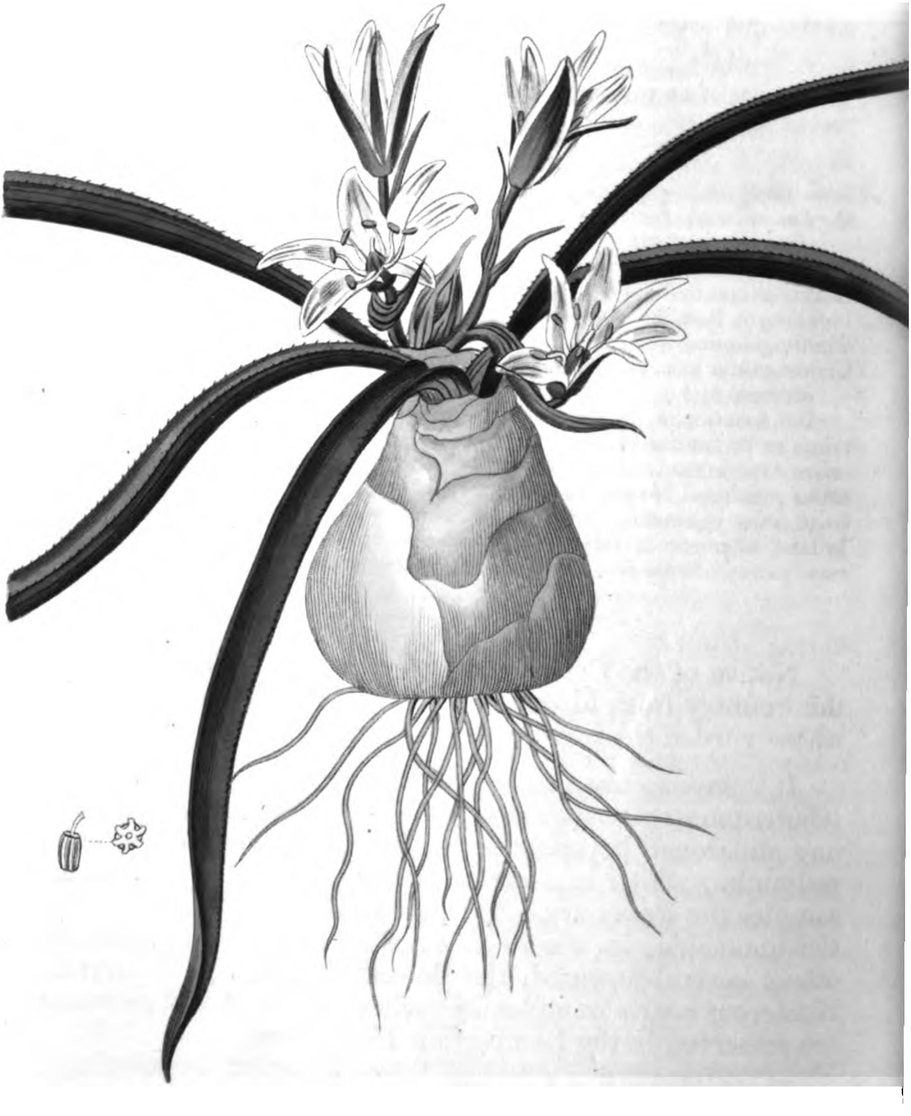


M. Hart. del. Pub by J. Ridgway 170 Piccadilly July.1.1821. J. Watts.

ORNITHOGALUM fimbriatum.

Hairy-leaved Star of Bethlehem.

HEXANDRIA *MONOGYNIA.*

Nat. ord. ASPHODELI. *Jussieu gen.* 51. *Div. IV.* Flores spicati. Radix bulbosa. Calyx (corolla *nob.)* sexpartitus, basi staminifer.
ASPHODELEÆ. *Brown prod.* 1. 274.
ORNITHOGALUM. Suprà vol. 2. *fol.* 158.

O. *fimbriatum*, racemo subcorymboso paucifloro, pedunculis fructiferis elongatis patentissimis: foliis linearibus scapo pedunculisque hirsutis. *Marsch. bieb. flor. taur. cauc.* 1. 276.
Ornithogalum fimbriatum. *Willd. in der gesells naturf. freund. zu Berl. neue schrifte.* 3. 420. *Persoon syn.* 1. 364.
Ornithogalo umbellato affine foliis pilosis. *Pallas in nov. act. petrop.* 10. 309.
Ornithogalum samium villosum umbellatum album. *Tournef. cor.* 26; *(fide Marsch. bieb.)*

Folia *radicalia, linearia, acuta, margine villis ciliata,* (*v. nunc in spontaneis extùs omninò villosa).* Scapus *erectus vix digitalis.* Flores *facie et colore* ORNITHOGALI *umbellati;* pedunculi *bini (nunc plures) uniflori patentes subalterni in apice scapi.* Bractea *lanceolata acuta membranacea ferè longitudine pedunculi.* Willd. in loc. cit. *Simillimum* ORNITHOGALO umbellato, *ut præter hirsutiem vix ullâ aliâ notâ distinguendum. Pili foliorum scapi pedunculorum crebri patuli albi.* Marsch. bieb. loc. cit.

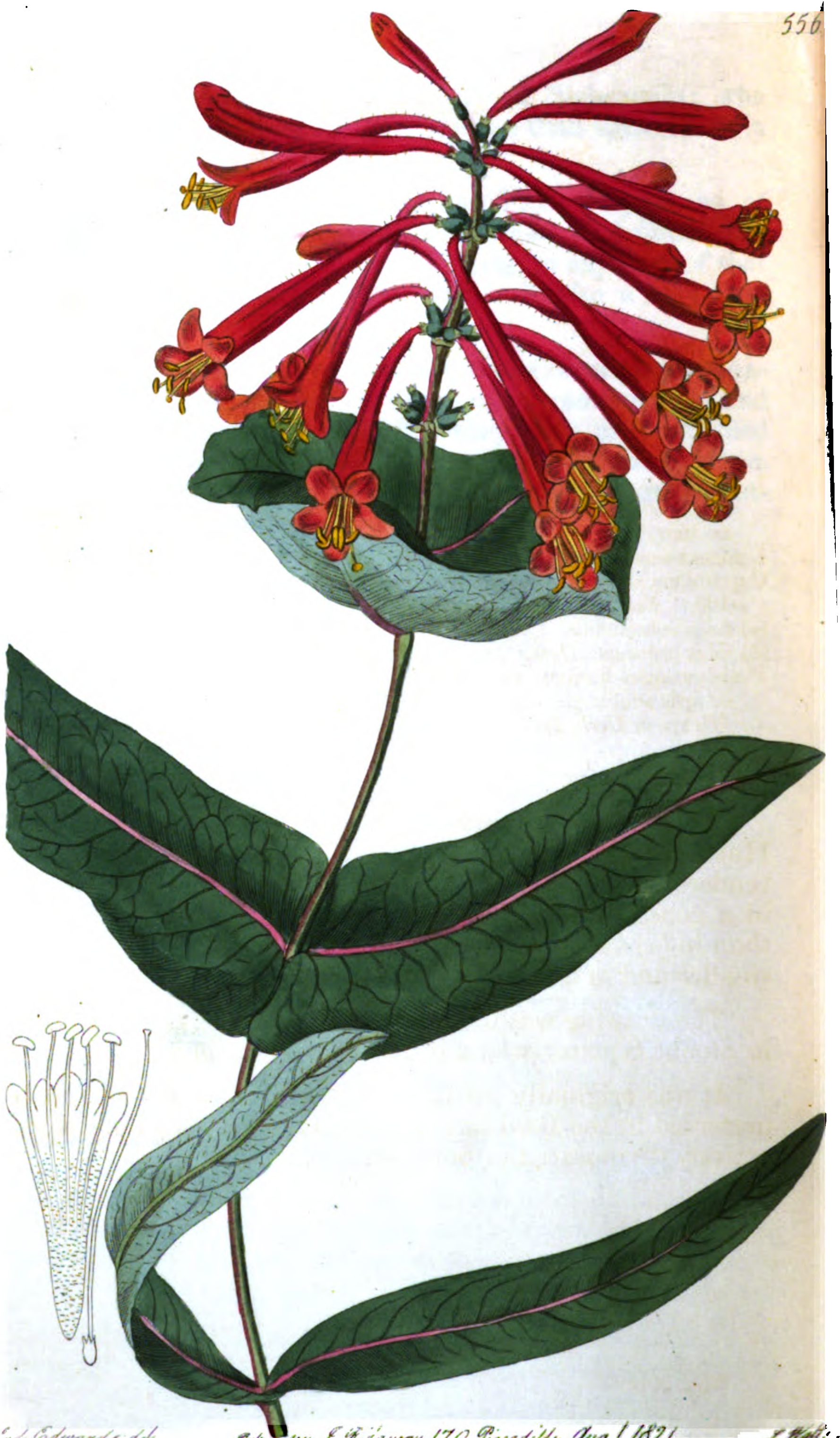
Native of the Crimea, and very recently introduced into this country from Moscow, by the Horticultural Society, in whose garden the present drawing was taken in May last.

It comes so close to our "Common Star of Bethlehem" (ORNITHOGALUM *umbellatum)*, that we can scarcely perceive any difference beyond the fur on the leaves, scape, and peduncles, which in *umbellatum* are all smooth. In some samples the leaves are only fringed, in others furred all over the underside; in some the scape is only two-flowered, in others several-flowered, the flowers disposed in a corymb. Numerous native samples in various states of inflorescence are preserved in the Lambertian Herbarium.

Both this and *umbellatum* were found growing together at the skirts of forests and thickets in the Crimea, by that indefatigable observer, M. Marschall of Bieberstein; who remarks that *fimbriatum* is less common than *umbellatum* in those parts.

ORNITHOGALUM *montanum* of the Flora Napolitana of Tenore (1. 176. *t*. 33.), comes very near to *fimbriatum*, but there is no mention of any fur belonging to any part of that plant. *Exscapum* of the same author is also a very near species.

The segments of the corolla in this section of ORNITHOGALUM are so deeply divided, as to appear so many petals, and though they are really connected, they seem as if attached frontwise and separately to the receptacle of the germen. The three outer segments are slightly protuberant at the outside of the base, and appear as if pouched.



Syd Edwards del. Pub by J. Ridgway 170 Piccadilly Aug 1. 1821. J. Watt

LONICERA sempervirens; β: *minor.*

Smaller Trumpet-Honeysuckle.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CAPRIFOLIA (CAPRIFOLIACEÆ). *Jussieu gen.* 210. *Div. I.* Calyx calyculatus, aut bracteatus. Stylus unicus. Corolla monopetala.
LONICEREÆ. *Brown in app. to abel's china.*
LONICERA. *Suprà vol.* 1. *fol.* 31.

Div. Periclymena, *caule volubili.*

L. ***sempervirens,*** spicis subnudis terminalibus, foliis oblongis: summis connato-perfoliatis, corollis subæqualibus tubo supernè ventricoso. *Solander in Hort. Kew.* 1. 230.

Lonicera sempervirens. *Willd. sp. pl.* 1. 983. *Hort. Kew. ed.* 2. 1. 277.

Caprifolium sempervirens. *Michaux bor. amer.* 1. 105. *Pursh amer. sept.* 1. 160. *Nuttall gen.* 1. 138.

(α) foliis subrotundis. *Curtis's magaz.* 781. *Schmidt arb. t.* 104.

(β) foliis oblongis. *Hort. Kew. ed.* 2. 1. 377. *Curtis's magaz.* 1753.

Periclymenum floribus verticillatis terminalibus pedunculatis, foliis ovatis integris subtùs glaucis; summis connato-perfoliatis. *Phrasis in exemplari Milleri in Herb. Banks. asservato inscripta.*

A presumptive variety of the well-known "Trumpet-Honeysuckle." Native of South Carolina, and somewhat tenderer than the common sort; requiring to be cultivated in a conservatory or greenhouse. The leaves are smaller than in (α) and glaucous underneath; the bunches of flowers smaller and of a brighter scarlet.

The drawing was taken at the nursery of Messrs. Fraser, in Sloane Square, where it had been lately imported.

It was originally introduced by Miller, whose sample is preserved in the Banksian Herbarium; but had long since entirely disappeared in our collections.

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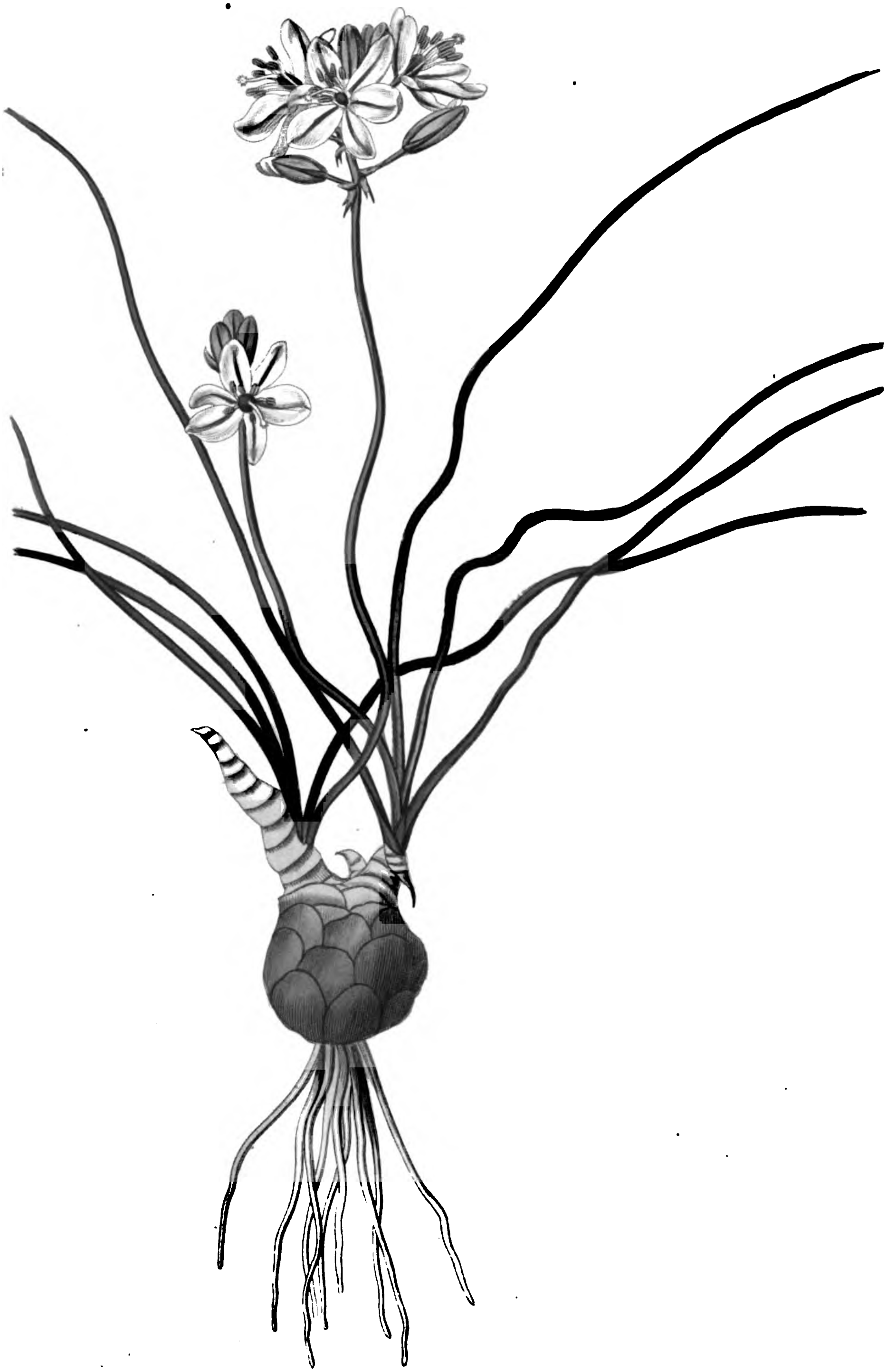


M. Hart. del. Pub by J. Ridgway 170 Piccadilly Aug. 1. 1821 J. C.

ALBUCA filifolia.

Fine-leaved Albuca.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Asphodeli. *Jussieu gen.* 51. *Div. IV.* Flores spicati. Radix bulbosa. Corolla sexpartita, basi staminifera.
Asphodeleæ. *Brown prod.* 1. 274.
ALBUCA. Suprà vol. 4. *fol.* 277.

Div. Corollæ æqualitèr patentes.

A. *filifolia*, foliis filiformibus flexuosis reflexis scapo longioribus, scapo simplici filiformi, racemo paucifloro. *Willd. sp. pl.* 2. 135; *(sub* Antherico filifolio).

Albuca filifolia. *Nob. in loco præsenti.*

Anthericum filifolium. *Jacq. ic. rar.* 2. *t.* 414. *Coll. suppl.* 93. *Thunb. prod.* 62.? *Willd. in loco suprà citato.*

Tota glabra. (Bulbus *ovato-rotundus, compacto-squamosus sordescens, integumentis fuscis.)* Folia *radicalia plerumque tria, filiformia, semiteretia, acuta, nitida, basi purpurascentia, cæterùm viridia, magìs minùsve flexuosa, reclinata, rigidula, longiora pedalia, una cum scapo intermedio ad basin comprehensa vagina una alterave scariosa, pallida, transversìm striata, plus minus semunciam longa, in planta florente fissa et ad latus abscedente.* Scapus *teres, simplex, nitidus, flexuosus, erectus, foliorum crassitie et ferè longitudine, infernè purpureus.* Racemus *terminalis, erectus.* Flores *inodori, plùs minùs septem.* Pedunculi *vix semunciales, patuli, bracteâ suffulti lanceolato-acuminatâ.* Corollæ *laciniæ oblongæ, obtusæ, parumpèr concavæ, patentissimæ, albidæ cum lineâ utrinque longitudinali media virente,* 3 *alternæ latiores.* Filamenta *subulata, æqualia, imberbia, erecta, corollâ duplo breviora, alba.* Antheræ *oblongæ, erectæ, flavæ.* Germen *superum, oblongum, triquetrum.* Stylus *filiformis, adscendens, albus, longitudine staminum.* Stigma *subcapitatum, villosum.* Jacq. coll. suppl. 93, 94.

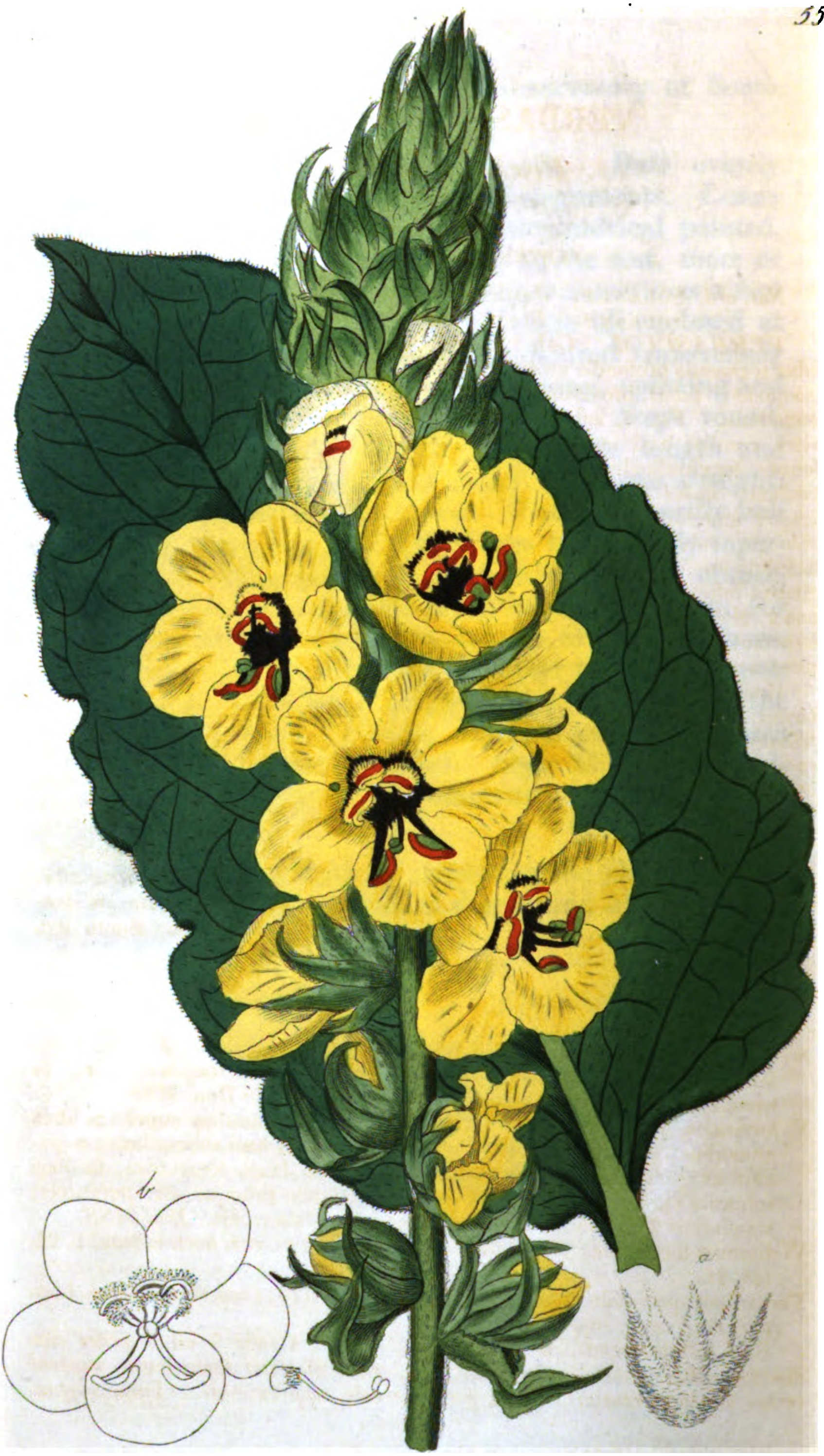
The present species, as well as *fugax* of this work (fol. 311), and *exuviata, vittata,* and *physodes* of Curtis's Botanical Magazine (Nos. 871, 1046, 1329), is far nearer akin to Albuca than to Anthericum, in which last it has been deposited by Jacquin and all subsequent writers till removed by ourselves. It is very probable that the five, with some other kindred species, which have been misplaced in Anthericum, will be separated by others into a new genus; though in our view they are as conveniently stationed in Albuca.

Filifolia has been now first introduced by Mr. Griffin, from the Cape of Good Hope; where, according to Jacquin, it is found in Namaqua Land.

The drawing was taken in the conservatory at South Lambeth, in May last.

"The whole plant is quite smooth. *Bulb* ovately round, compactly scaled, with brown integuments. *Leaves* radical, generally three, filiform, semicylindrical pointed, shining, purplish at the base, green as to the rest, more or less flexuose, reclined, stiffish, the largest sometimes a foot in length, together with the centrical scape all enclosed at the base by one or two scariose pale coloured transversely wrinkled *rootsheaths*, about half an inch long, splitting and turning to one side when the plant flowers. *Scape* round, simple, shining, flexuose, upright, about the length and diameter of the leaves, purplish below. *Raceme* straight. *Flowers* without scent, about seven. *Peduncles* hardly half an inch long, spreading, subtended by a lanceolately taper-pointed *bracte*. Segments of the *corolla* oblong, obtuse, slightly concave, wide-spread, whitish, with a green (or purplish) vertical line along the middle of both surfaces, three alternate ones broader than the other three. *Filaments* subulate, equal, beardless, upright, twice shorter than the corolla, white. *Anthers* oblong, upright, yellow. *Germen* superior, oblong, three-cornered. *Style* filiform, ascending, white, the length of the stamens. *Stigma* slightly capitate, villous."

We had no opportunity of inspecting the plant in blossom, and have taken the above description of the species from Jacquin.



Syd. Edwards del.   Pub. by J. Ridgway 170 Piccadilly Aug. 1. 1821.   [illegible]

VERBASCUM formosum.

Fischer's Mullein.

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PENTANDRIA *MONOGYNIA.*

Nat. ord. SOLANEÆ. *Jussieu gen.* 124. *Div. I.* Fructus capsularis. SOLANEÆ. *Brown prod.* 1. 443. *Sect. II.*

VERBASCUM. *Cal.* inferus, monophyllus, parvus, persistens, 5-fidus segmentis profundis erectis acutis subæqualibus. *Cor.* 1-petala, rotata, inæqualis; *tubus* brevissimus; *limbus* patens, 5-fidus, laciniis profundis rotundatis. *Fil.* 5, subulata, inæqualia, distantia, declinata, lanata, breviora corollâ, basi inserta: *anth.* compressæ, erectæ, plùs minùsve reniformes, longitudinalitèr dehiscentes, incompletè biloculares. *Germ.* subrotundum: *stylus* filiformis, supernè levitèr extumescens, declinatus, sublongior staminibus; *stigma* obtusum. *Caps.* subrotundo-ovata v. ovato-oblonga, subcompressa, bilocularis, bivalvis, superne dehiscens, valvis interdum medium usque fissilibus; *dissepimentum* duplex, ex valvarum marginibus inflexis parallelis confectum, sæpè incompletum; *receptaculum* ovatum v. globosum, centrale, ex lateri utroque (fructu in statu præcoci saltèm inspecto) cum valvis connexum; *sem.* numerosa, minuta, angulosa, punctata, receptaculo inserta. *Smith in rees's cyclop. in loco; (é textu angl. vers.)*

Rad. *sæpiùs biennis, interdùm perennis, fusiformis.* Caulis *sæpiùs solitarius, sesqui-4-8-pedalis, erectus, modò strictissimus, raò subflexuosus, foliosus, in pluribus alternè ramosus, multiflorus, paniculatus, pedunculis racemosis; in* V. Myconi *nullus.* *Anni* folia *prioris cuncta radicalia, insequentis caulina, petiolata, sessilia v. decurrentia; semper alterna, simplicia, oblonga; indivisâ, lobata v. pinnatifida; simplicitèr v. duplicatè crenata v. dentata, rarò integra*; *sæpiùs pube lanatâ albâ densâ, hirsutâ v. stellatâ, v. farinosâ atque deciduâ, vestita; interdùm glabriuscula.* Flores *racemosi, sæpiùs aggregati, conferti atque numerosi; lutei, rariùs luteo-albicantes, v. purpurascentes, v. subfuscentes.* Bracteæ *sæpiùs ovatæ, v. lanceolatæ, acutæ, ordine duplici (interiore et exteriore) dispositæ.* Smith loc. cit. (ex angl.)

Sect. I. Thapsus. *Spica cylindrica conferta, rarò laxa. Flores magni sessiles. Bracteæ ternæ. Herbæ tomentosæ. Caules simplices, v. rariùs ramosi, stricti. Folia, sessilia, sæpiùs decurrentia.* Don. MSS.

V. *formosum,* ramosum; foliis sublanatis subtùs albicantibus suprà viridibus nitentibus; inferioribus petiolatis oblongis sinuatis basi subcordatis; superioribus sessilibus cordatis acuminatis: spica laxa, tomentosa, floribus solitariis corollis calyce triplo longioribus fauce tuboque atro-purpureis; staminibus 2 inferioribus declinatis remotis, glaberrimis. *Don MSS.*

Verbascum formosum. *Fischer in litt.* *Schranck pl. rar. hort. monac.* 1. 22. *tab.* 22.

Verbascum spectabile. *Link enum. hort. berol.* 1. 176*; (non vero Marsch. bieb. flor. taur. cauc. suppl.* 158.)

Rad. *subfusiformis, divisa, fibrosa, alba.* Caulis 2 *ad* 3 *pedes cum dimidio altus, strictus, ramosus, teres, pilis stellatis tomentosus, supernè versus tomento densiore:* rami *pauci, erecti, approximati.* Folia *rugosa,*

nequaquam decurrentia, infima *ambientia, humi sub anthesi recumbentia, sinuata, crenata*, superiora *obsoletè sinuata crenataque*, summa *lato-cordata crenata cum acumine.* Spica *elongata*, bracteæ *trinæ lanceolato-acuminatæ extus tomentosæ, una (in cujus axillâ sedet flos) major*, 2 *minores calyci subtensæ atque æquales, cum majori decussantes, adscendentes.* Cal. *albo-lanatus, subbilabiato-rotatus, semi-5-fidus segmentis acuminatis, intùs nudus nitens.* Flores *suaveolentes:* cor. *sesquiunciam v. ultrà transversa, sulfurea areolâ fauciali nigricante nudiusculâ lucidâ;* limbus *bilabiato-rotatus extùs tomentosus*, laciniis *rotundatis*, 2 superioribus *subminoribus divisurâ mutuâ breviore*, 3 inferioribus *tubo tenùs partitis, horum mediâ majore orbiculatâ;* tubus *brevissimus intùs nigricans.* Stam. *summo tubo inserta;* 3 superiora *conniventia erecta areolâ nigrâ vix longiora, filamentis atropurpureis hirsuto-barbatis; anth. lunulatæ, barbâ pallidè lutescenti receptaculi sui nidulantes;* 2 inferiora *declinata invicèm divergentia, filamentis compresso-filiformibus nigricantibus firmis robustis nudiusculis infernè secundùm latus interius pilis paucis raris conspersis:* anth. *nudæ, compresso-lineares angustæ, uniloculares mentientes, per latus interius filamenti carinato-adnatæ, rimâ mediâ longitudinali dehiscentes*, thecâ *viridiusculâ subnaviculari*, polline *aurantiaco-flavescente grumoso:* pubes staminea *è pilis clavato-capitatis.* Stylus *purpureus, filiformis, glaber, supernè subclavato-grossescens, filamentis inferioribus æqualis duplo verò tenuior:* stigma *viride, bilabiato-capitatum pruinosum, lobis crassis obtusis replicatis:* germen *ovato-rotundum, parvulum, albo-lanatum.* Don MSS.

The species made its first appearance in this country in the Physic Garden at Chelsea, where seeds had been sent by Dr. Fischer from the Gorenki Garden at Moscow. Its native spot is not specified; but is probably somewhere within the oriental provinces of Russia.

In Professor's Link's Catalogue of the Berlin Garden the species is made synonymous with VERBASCUM *spectabile* of the Supplement to the Flora Taurico-caucasica; but if the description of that species comes even near to the truth, which from the usual correctness and fidelity of its author there is no reason to doubt, the two can never belong to the same type; and we have consequently retained the one before us under the title by which it is accurately described, but indifferently figured in "*The Rare Plants of the Botanic Garden at Munich, by M. Schranck.*"

Formosum is distinguished from its known congeners by leaves which are not decurrent, the lowermost of which are petioled and sinuated, by a loosishly-set spike of large sulphur-coloured flowers with a black-purple smooth shining faux, and by two lower longer declined nearly smooth stamens.

It is a handsome tolerably hardy biennial with a sweet-scented blossom, and will soon become general in our collections.

The drawing was taken some time ago at the nursery of Messrs. Whitley and Co. in the King's Road, Fulham. *Don MSS.*

We are to thank Mr. Don for the above account of the species.

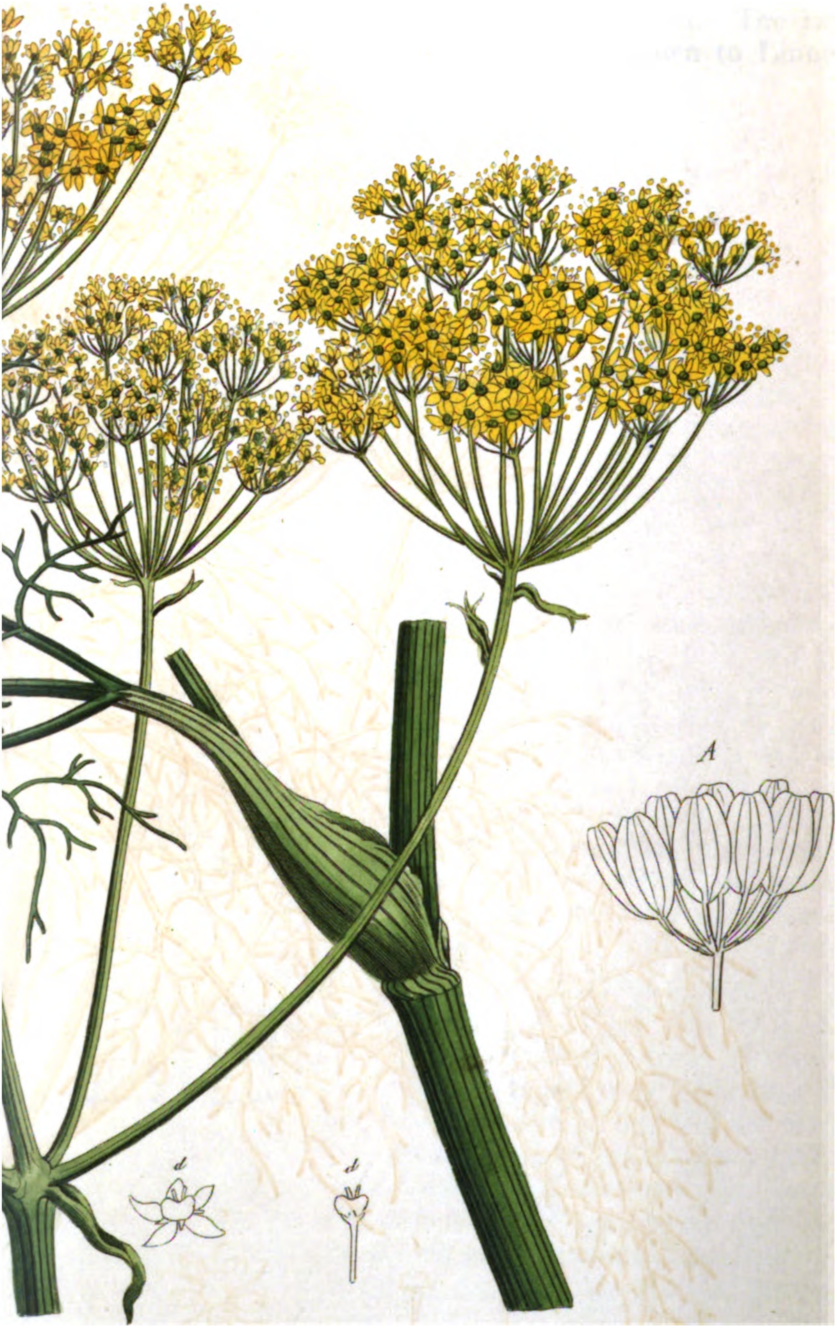
The following observations are borrowed from Sir James E. Smith.

" There is so great a space between the inner edges of " the inflexed valves and the central receptacle, in VERBASCUM *pulverulentum* and some other species, that the " ripe capsule is literally of but one common cell, though " originally of two. CELSIA differs from this genus in hav- " ing four stamens only, two long and two short. Professor " Schrader, in the first part of an excellent monograph on " VERBASCUM, published at Gottingen in 1813, p. 14, " asserts that this difference is very constant and invariable, " and therefore he is not disposed to concur with those " botanists who combine these two genera. We heartily " assent to this determination. With regard to the new " genus of RAMONDIA, founded, if we mistake not, on VERBASCUM *Myconi*, and distinguished by having a capsule of " one cell, with two lateral linear receptacles; we must " suspend our judgment till we can examine into that " character, but the habit of the plant, and its oblong " heart-shaped two-celled anthers, indicate a very distinct " genus."

" The species of VERBASCUM are amongst the most un- " certain of any well-known genus. They are more than " commonly variable in the colour and size of their flowers, " and appear to be very subject to hybridous intermixture. " Hence we are led to mistrust some reputed species, de- " scribed even by the ablest writers. The production of " several mule ones has been traced and recorded, and we " have observed others. Professor Schrader indeed has long " cultivated and studied what he has described, and his " accuracy is indisputable."

" The whole genus is nearly, if not entirely, European,

" the species found in America, except perhaps VERBASCUM " *Claytoni* of Pursh and Michaux, having been apparently " introduced from this quarter of the world. The Levant " produces many fine ones, not well known to Linnæus." *Smith in Rees's cyclop. in loco.*



Aug. 1. 1821

S. Watts sc.

PEUCEDANUM aureum.

Golden-flowered Sulphur-wort.

PENTANDRIA *DIGYNIA.*

Nat. ord. UMBELLIFERÆ. *Jussieu gen.* 218. *Div. III.* Umbelliferæ veræ. Umbellæ et umbellulæ involucratæ. *Tribus IX.* SELINEÆ. Fructus compressi plani, sæpè alati. Involucra varia. *Sprengel in Rœmer et Schulte. syst. veg.* 6.

PEUCEDANUM. *Fructus* plani, màrginati, non alati, costis dorsalibus 3 aut 5 obtusis valleculis rapheque parallelâ vittatis. *Involucrum* subnullum aut oligophyllum. *Sprengel in Rœmer et Schulte. gen.* 1. 286.

P. *aureum*, foliis ternato-supradecompositis flaccidis, foliolis pinnatifidis teneris, laciniis linearibus acutis, involucro subpinnatifido. *Sprengel in Rœmer et Schulte. syst. veg.* 6. 570.

Peucedanum aureum. *Solander in hort. Kew.* 1. 341. *ed.* 2. 2. 135. *Willd. sp. pl.* 1. 1407. *Sprengel umbel. spec.* 58.

Flores *flavi.* Caulis 3-*pedalis, teres, glaber, subramosus, foliosus, digiti medii crassitie:* folia *petiolis flaccidis vaginantibus quinquiès tripartitis;* foliola *tenera, flaccida, ferè* TRICHOMANES, *laciniis brevibus: siccata fuscescunt.* Umbellæ *terminales, radiis* 40-50, *subinæqualibus, glabris.* Involucrum universale *è foliis aliquot imperfectis;* partiale *polyphyllum setaceum, umbellulis parum brevius.* Fructus *ovales, compressi, dorso jugis* 5 *obsoletis, vittis* 4, *stylis coronati.* Spreng. l. c.

The order *Umbelliferæ* has been lately remodelled by Professor Sprengel, in a monograph which we believe is not yet published; but which has been communicated to Messrs. Rœmer and Schulte, by whom the substance is embodied in the sixth volume of their edition of the "Systema Vegetabilium."

PEUCEDANUM ranks in the tribe *Selineæ*, distinguished by compressed, flat, frequently winged fruit, and variable involucres. Its generic character is founded on "the flat marginated wingless fruit, with either three or five obtuse dorsal ribs (costæ) vertically scored by sunk lines and a parallel suture."

The present species is native of the Canary Islands, from whence it was introduced by Mr. Francis Masson in 1790.

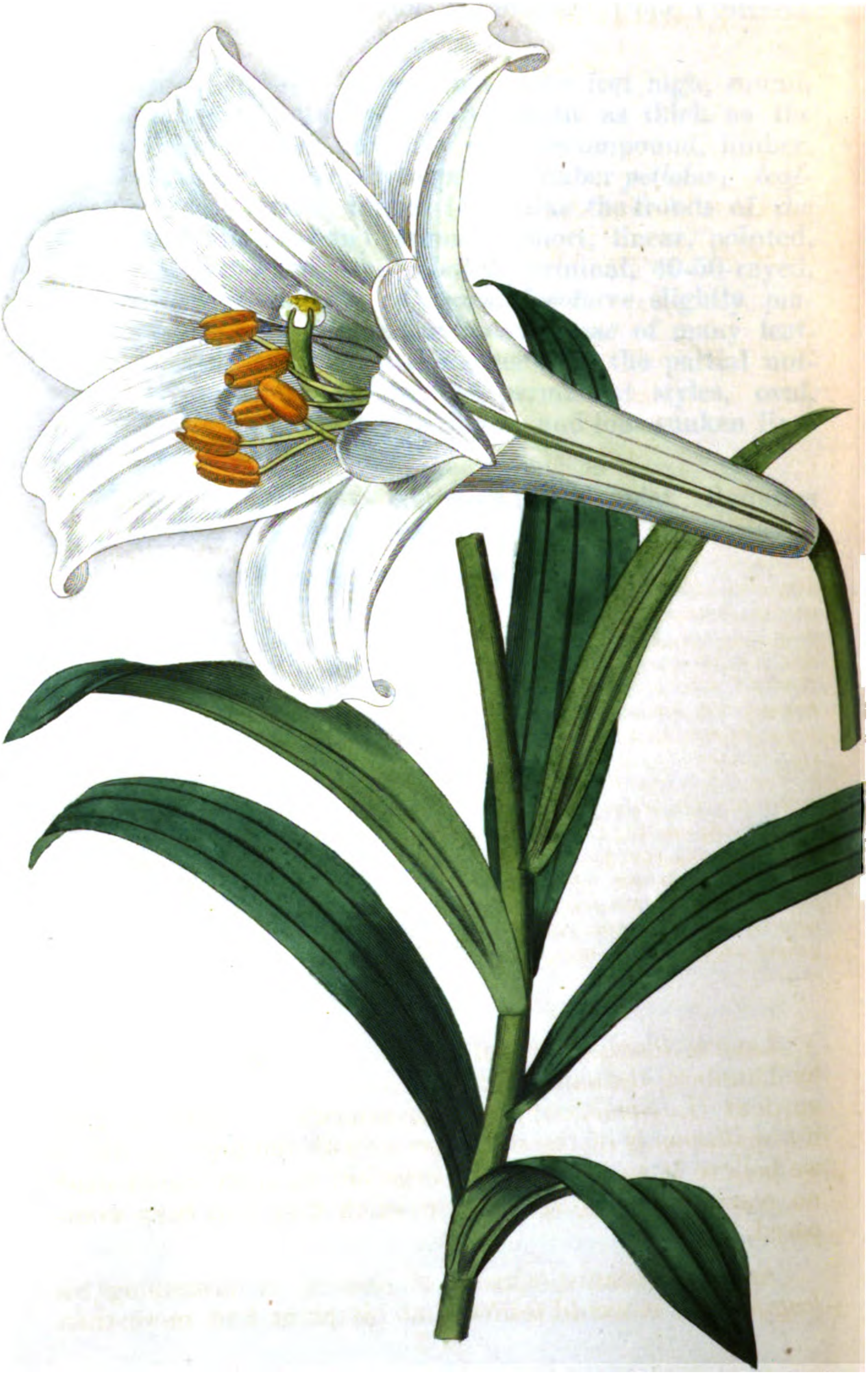
The drawing was taken from a sample which flowered in Mr. Lambert's garden, at Boyton, in Wiltshire.

The following description is adopted from Professor Sprengel.

"*Flowers* yellow. *Stem* about three feet high, round, smooth, slightly branched, leafy, about as thick as the middle finger: *leaves* ternately superdecompound, limber, with sheathing, fivefoldedly tripartite limber *petioles*; *leaflets* pinnatifid, tender, limber (very like the fronds of the Fern called Maiden-hair), segments short, linear, pointed, turning brown when dry. *Umbels* terminal, 40-50-rayed, slightly uneven, smooth. *Common Involucre* slightly pinnatifid; *leaflets* few, imperfect: *partial one* of many leaflets, setaceous, and but little shorter than the partial umbels. *Fruit* surmounted by the permanent styles, oval, compressed, with five obsolete ridges, and four sunken lines along the back.

Marked in the Hortus Kewensis as a biennial. Requires the protection of a greenhouse.

It has never been figured in any other work.



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LILIUM longiflorum; *β. suaveolens.*

Sweet-scented Chinese Lily.

◆

HEXANDRIA *MONOGYNIA.*

Nat. ord. Lilia. *Jussieu gen.* 48.
Liliaceæ. *Brown MSS.*
LILIUM. *Suprà vol.* 2. *fol.* 132.

L. *longiflorum*, foliis sparsis lanceolatis, corollis tubulato-campanulatis, caule glabro. *Thunb. in trans. linn. soc.* 2. 333.
Lilium longiflorum. *Willd. sp. pl.* 2. 84.
Lilium candidum. *Thunb. jap.* 133; *(non aliorum).*
Biakko *vulgò* Juri. *Kæmpf. amœn.* 871?
(β) *suaveolens;* uniflorum.

Caulis *pedalis ultràque diametro ferè pennæ scriptoriæ, sparsìm dissitiùsque foliosus, glaber.* Fol. *sessilia, patentissima, angustiùs lanceolata, glabra, nervosa, nervis tribus conspicuioribus, 3-4-uncialia latitudine quater quinquiesve minore, acuminata, plana, utrinque attenuata, intervallis plurimùm longiora.* Pedunculus *(individui præsentis) solitarius, terminalis, uniflorus, erectus, 3-uncialis, robustus atque caule parùm tenuior, nudus.* Flos *candidus, nutans, elongato-campanulatus, 5-uncialis v. ultrà, sexpartitus, laciniis elongato-spathulatis acutis,* interioribus *sublatioribus cum nervo medio verticali exteriore simplici prominente sulco interiori utrinque marginato respondente, laminâ ovali-lanceolatâ unciam circà transversâ,* exteriorum ¼ *circa latiore;* tubus *ex unguibus angustis elongatis imbricato-cohærentibus (facilè solvendis) conflatus, chloroleucus, 3-nervis, diametro circà pennæ olorinæ, limbo æqualis, supernè versùs levissimè dilàtescens;* limbus *turbinato-recurvus.* Fil. *laxiùs fasciculata, suprà curvo brevi assurgentia, corollâ (imo cujus fundo inserta)* ¼ *circà breviora, gracilia, alba;* anth. *vitellinæ, vibratiles, oblongæ, post pollinis defluxum subtrotundæ.* Stylus *istorum æquilongus duplo tamen robustior, triqueter, albus;* stigma *capitato-trilobum, lobis carnosis crassis breviter ovatis pruinosis replicatis, canaliculo obsoleto notatis.* Germ. *viride, elongato-oblongum, duplo brevius stylo, 3-sulco-trigonum angulis obtusis cum lineâ mediâ depressâ.*

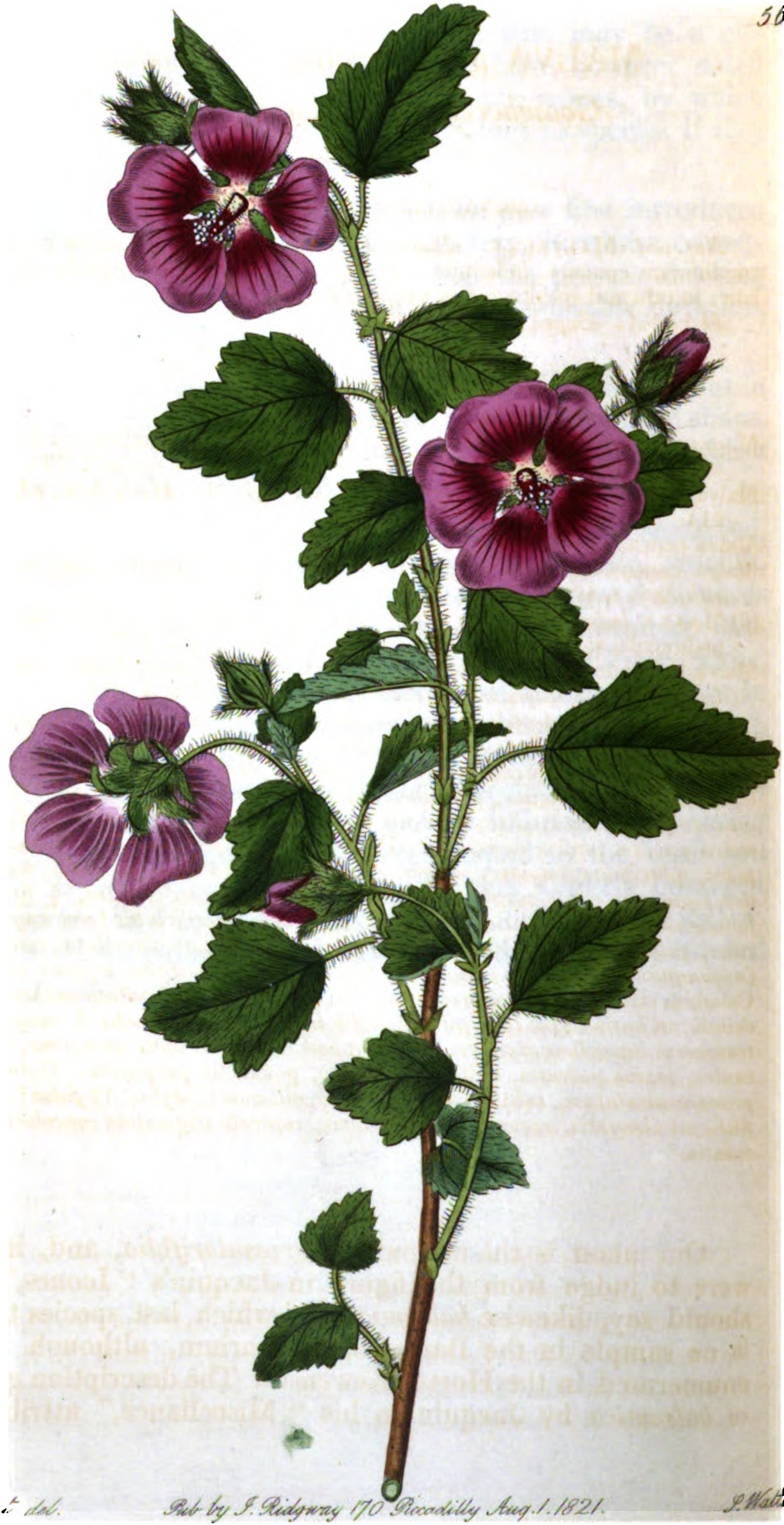
Lilium *longiflorum*, of Japan, was originally deemed by Thunberg the same with the Common White Lily of our gardens (L. *candidum)*; but was afterwards separated, and if *longiflorum* is of the same species with the present, which we believe it to be from the description, there could exist no reason for uniting the two when they had been compared.

As that botanist speaks of *flowers*, in describing his *longiflorum*, it would follow that his plant had more than one flower, which ours had not; but this may be a circumstance incident to culture. We have however noted the two as distinct varieties under proper names, by which they may be recognised and kept distinct as species if they should prove finally different.

The subject of this article has been now first introduced from China by the Horticultural Society, in whose conservatory it flowered in May last, when the present drawing was taken. The flower is elegant, of considerable duration, and delicately fragrant.

The species comes very near to LILIUM *japonicum*, but in that the corolla is twice larger, of a broad turbinate shape, very shortly tubular at the base, the pollen of a reddish brown, and the scent the reverse of agreeable.

Stem a foot or more high, smooth. *Leaves* scattered, wide-set, sessile, spreading, narrowly lanceolate, smooth, 3-4 inches long, flat, taper-pointed, narrowed towards the base. *Peduncle* (in our plant) solitary, terminal, one-flowered, upright, about 3 inches long. *Flower* white, nodding, elongatedly campanulate, five inches or more in length, sixparted; *segments* spatulately lengthened, pointed, *inner ones* rather broader, with an outer prominent midrib corresponding with an inner marginate furrow; *tube* greenish, formed by the long narrow imbricately cohering ungues of the segments, 3-nerved, equal to the limb and with the diameter of a swan-quill, very slightly enlarged upwards; *limb* turbinately recurved. *Anthers* deep yellow, when all the pollen is shed, nearly round. *Stigma* a 3-lobed fleshy head.



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MALVA grossularifolia; *α; inodora.*

Gooseberry-leaved Cape-Mallow.

MONADELPHIA *POLYANDRIA.*

Nat. ord. MALVACEÆ. *Jussieu gen.* 271. *Div. II.* Stamina in tubum corolliferum connata, indefinita. Fructus multicapsularis; capsulæ verticillatæ, in orbem dispositæ aut in unam compactæ.
MALVA. Suprà vol. 4. *fol.* 295.

Div. Foliis angulatis.

M. *grossularifolia,* foliis oblongis subtrilobis inæqualitèr dentatis, pedunculis solitariis petioli longitudine. *Willd. sp. pl.* 3. 783; *et enum.* 2. 730.
Malva grossularifolia. *Cavan. diss.* 2. 71. *t.* 24. *fig.* 2. *Hort. Kew. ed.* 2. 4. 214.
Malva capensis. *β. Lin. sp. pl. ed.* 2. 2. 968.
Malva capensis frutescens grossulariæ folio majore hirsuto. *Dillen. hort. elth.* 209. *t.* 169. *f.* 207.
(*β*) MALVA *balsamica,* foliis ovatis subtrilobis acutis inæqualitèr dentatis, pedunculis solitariis petiolo longioribus. *Willd. sp. pl.* 3. 782.
Malva balsamica. *Jacq. ic. rar.* 1. *t.* 140; *(nec verò misc.* 2. 321, *ubi fortè* fragrantis *varietatem intelligitur?) Hort. Kew. ed.* 2. 4. 214.

Frutex *ramosus 4-pedalis v. altior cortice fusco:* rami *hirsuti rubro-fusci, novelli virentes.* Fol. *(in plantâ adultâ)* 1-*sesquiuncialia, laxiùs hirsuta, ovata, subtriloba, depresso-nervosa, inæqualitèr dentata acutula:* pet. *brevior laminâ:* stipulæ *geminæ, parvulæ, ovatæ, ciliatæ, acutæ, patentes.* Flores *roseo-rubentes, intùs disco et venis sanguineo-purpurascentes, inodori, diametro unciam parùm excedente.* Pedunculi *axillares, solitarii, subuniflori, pilosi, plurimùm longiores petiolo.* Cal. inter. *viridis, extùs pilosus, semi5fidus segmentis ovato-cuspidatis:* exter. 3-*phyllus remotiusculus,* ⅓ *brevior, foliolis distantibus, rotatis, lanceolatis, segmentis interioris bis terve angustioribus, piloso-ciliatis.* Cor. 6-*partita rotata:* lac. *oblato-obcordatæ, contiguæ (nequaquàm imbricantes) unguiculo brevi; disco et margine inferno villosæ.* Columna staminea ¼ *circà brevior corollâ, pro* ⅓ *circà pedicellato-antherifera, deindè ad basin usque tota pilis stellatis hirsuta, basi maculis* 5 *sanguineis transversè linearibus divisuris corollæ oppositis notata:* anth. *numerosæ, nigricantes, laxiùs patentes,* polline *ochroleuco,* pedicellis *purpureis.* Germ. *depresso-orbiculatum, sub12radiatum, disco villosum:* stylus 12-*fidus? lobis filiformi-elongatis, recurvatis, sanguineis, capitulo stigmatoso concolori apiculatis.*

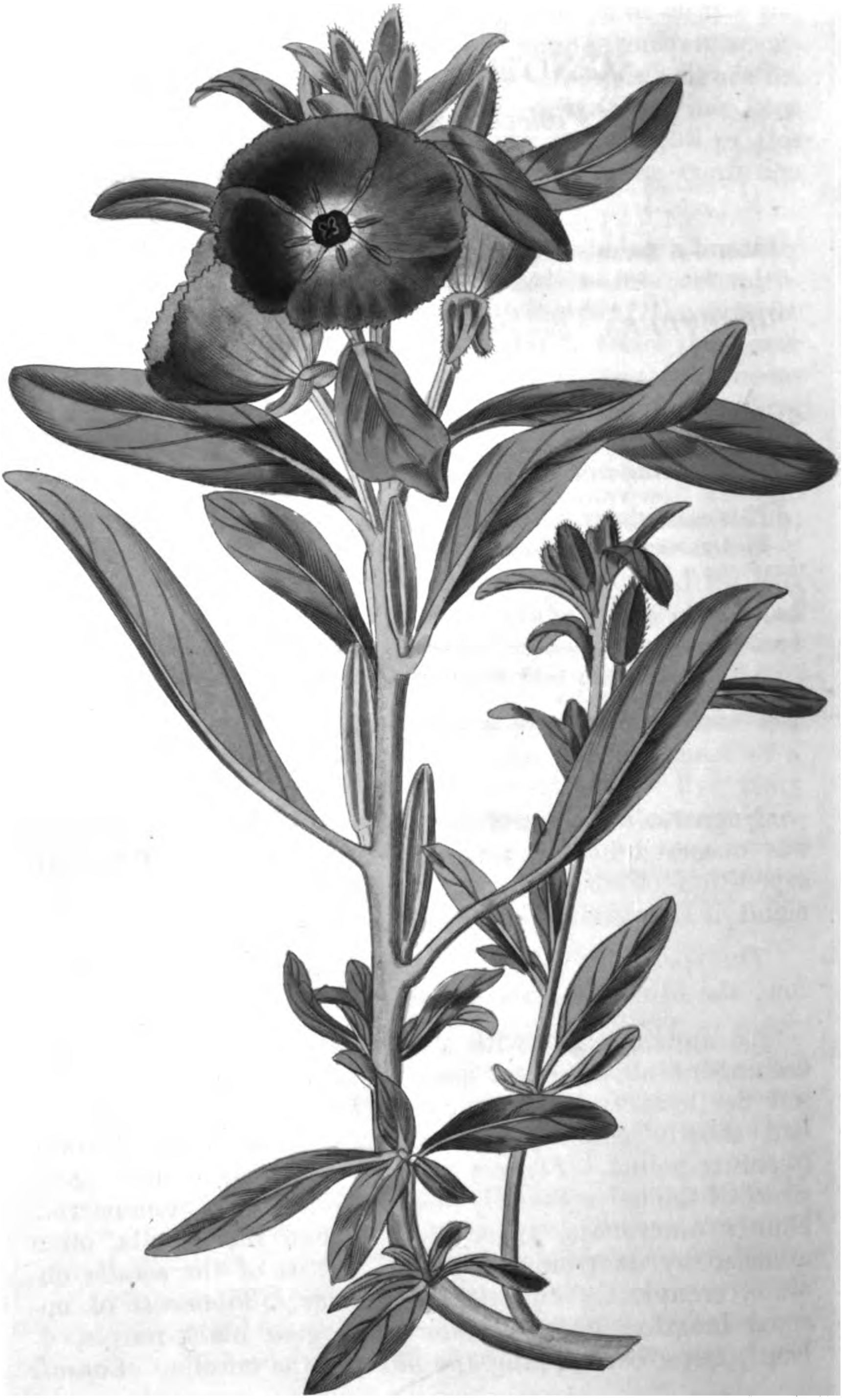
Our plant is the undoubted *grossularifolia,* and, if we were to judge from the figure in Jacquin's "Icones," we should say, likewise *balsamica:* of which last species there is no sample in the Banksian Herbarium, although it is enumerated in the Hortus Kewensis. The description given of *balsamica* by Jacquin in his "Miscellanea," attributes

however a fragrance to the foliage of that plant clearly not belonging to the present, where the foliage is entirely scentless. We cannot help suspecting that Jacquin's figure belongs to *grossularifolia*, but that his description has been taken from a variety of *fragrans* (see vol. 4. 296 of this work), and that *balsamica* has arisen from some confusion between *fragrans* and *grossularifolia.*

Grossularifolia differs from *fragrans*, in being a humbler and slenderer plant, with smaller scentless less conspicuously lobed leaves and one-flowered peduncles; the exterior calyx is also placed at a greater distance from the inner than in *fragrans*, and the lower part of the stamineous column is covered all the way to the base with a starry pubescence, which is not the case in *fragrans*, where the pubescence is only to be found just below the anthers.

Grossularifolia is a hardy valuable greenhouse shrub; producing the summer through a profusion of rose-coloured blossom. It seeds freely; and is easily propagated by cuttings. The seedling plants vary exceedingly in the size and even shape of their leaves, which are sometimes round and cordate at the base, at others tapered and cuneate.

The drawing was taken from a plant about four feet high, with a brown woody stem about the thickness of a man's thumb, and supposed to be about four or five years old; and which had been raised from seed in a cottage garden at Southampton.



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ŒNOTHERA Romanzovii.

Violet-flowered Œnothera.

OCTANDRIA *MONOGYNIA.*

Nat. ord. ONAGRÆ. *Jussieu gen.* 317. *Div. III.* Stylus unicus. Fructus capsularis. Stamina petalorum dupla.
ONAGRARIÆ. *Jussieu in ann. du mus.* 5. 21.
ŒNOTHERA. *Suprà vol.* 2. *fol.* 147.

Œ. *Romanzovii,* ramis elongatis lentis, foliis lanceolatis mucrone recurvo; calycis segmentis lineari-oblongis corollâ duplo brevioribus capsulis cylindraceo-oblongis: stigmate 4-lobo fauce incluso. *Don MSS.*

Œnothera Romanzovii. *Ledebour MSS.* *Hornem. hort. hafn. suppl.* 1. 133. *Link enum. hort. berol.* 1. 378.

Planta *annua, sericeo-glaucescens.* Caulis *infernè decumbens, ramosissimus ramis adscendentibus mollibus.* Folia *alterna, lanceolata, brevitèr petiolata, integerrima mucrone recurvo.* Flores *violacei axillares.* *Segmenta* calycis *lineari-oblonga integerrima uninervia obtusè mucronata, duplo corollâ breviora, sæpè per paria collaterali-connexa.* Coræ. petala *obovata, margine crenulato-crispa.* Filamenta *inæqualia:* antheræ *oblongæ.* Stigma *atropurpureum, 4-lobum, corollæ faucem nunquam exsuperans.* Capsula *cylindracea, subuncialis, obsoletiùs 8-sulcata, basi attenuata.* Don MSS.

Native of the Northw-est Coast of America, where it was observed by Dr. Chamisso, the naturalist of the late expedition of discovery sent from Russia, under the command of Lieutenant Kotzebue.

The species is named in compliment to Count Romanzow, the Minister of the Russian Marine.

An annual plant with a glaucous silky surface. *Stem* decumbent at the lower part, numerously branched with soft flexile ascending branches. *Leaves* alternate, lanceolate, shortly petioled, quite entire, with a recurved mucro (separate point). *Flowers* axillary of a violet colour. *Segments* of the calyx linearly oblong, quite entire, one-nerved, bluntly mucronate, twice shorter than the corolla, often attached by their sides in pairs. Petals of the *corolla* obovate, crenulately curled at the edge. *Filaments* of unequal lengths; *anthers* oblong. *Stigma* black-purple, 4-lobed, never overtopping the faux of the corolla. *Capsule* cylindrical, about an inch long, obsoletely 8-furrowed, tapered at the base.

Closely akin to Œnothera *purpurea*; which is however truly distinct from it, and differs, by an upright rigid stem that divides into short stiff branches at the upper part; by broader shorter leaves with a straight mucro; by lanceolate keeled subulately pointed calycine leaflets, almost even with the corolla, which is of a red instead of a blue purple colour; by cordately ovate anthers; by a style protruded beyond the faux and even with the stamens; by a stigma sometimes entire, sometimes shallowly 4-lobed; lastly by capsules which are ventricose and far shorter, with eight deep longitudinal furrows and a rounded instead of a tapered base.

Œnothera *Romanzovii* is of very late introduction, having been received at the Physic Garden, Chelsea, either from Berlin or Moscow, the year before last; but is already to be met with in many collections in the vicinity of London, where it is treated as a hardy annual. The drawing was taken in Mr. Kent's garden, Clapton. *Don MSS.*

We have to thank Mr. Don for the above article.

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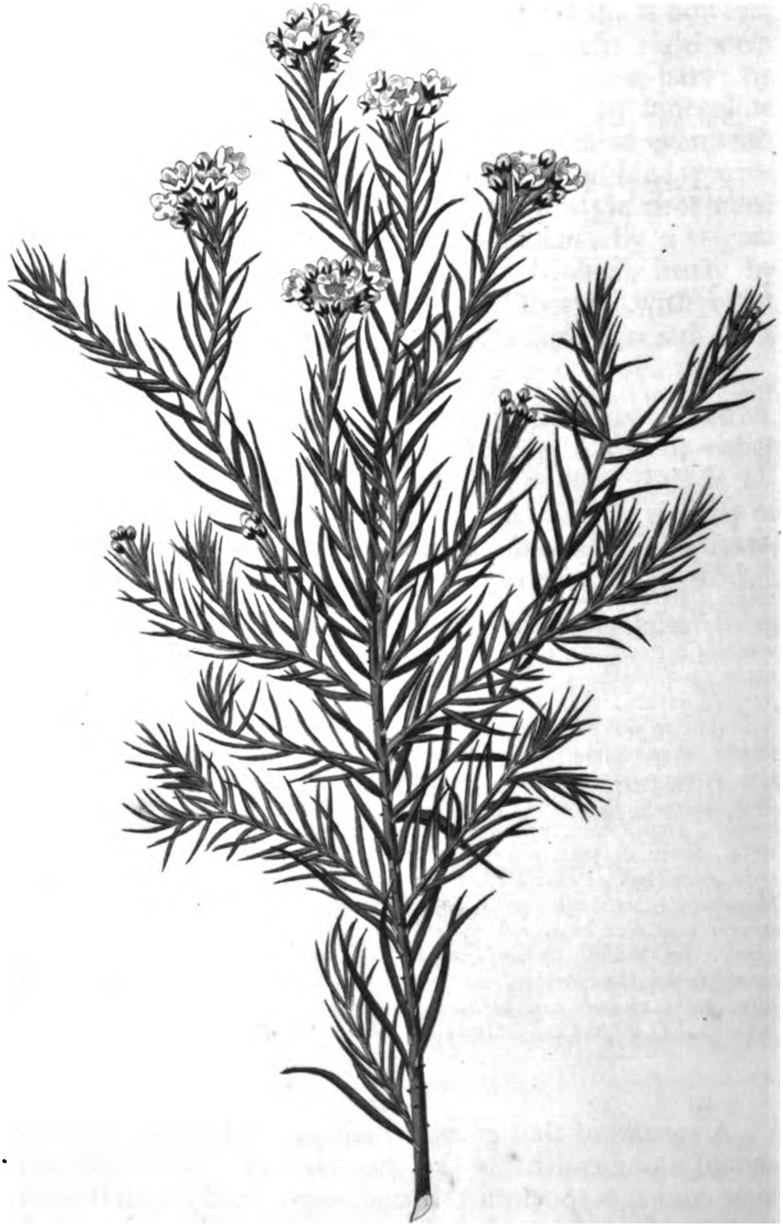

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DIOSMA rubra.

Juniper-leaved Diosma.

PENTANDRIA *MONOGYNIA.*

Nat. ord. RUTACEÆ. *Jussieu gen.* 269. *Div. III.* Genera Rutaceis affinia.
DIOSMEÆ. *Brown gen. rem. in flind. voy.* 2. 545.
DIOSMA. *Suprà vol.* 5. *fol.* 366.

Div. Diosmæ veræ. *Stamina extra coronam inserta;* 5 *fertilia: sterilia nulla.*

D. *rubra,* foliis linearibus mucronatis glabris (molli-ciliatis), carinatis subtùs bifariàm punctatis. *Lin. sp. pl. ed.* 2. 1. 287.

Diosma rubra. *Mill. dict. ed.* 8. *n.* 3. *Berg. cap.* 62. *Thunb. prod.* 42. *Willd. sp. pl.* 1. 1134. *Hort. Kew. ed.* 2. 2. 29.

Diosma ericifolia. *Andrews's reposit.* 451.

Diosma tenuifolium. *Willd. enum.* 1. 258?

Spiræa africana odorata, floribus suavè rubentibus. *Commel. rar.* 2. *t.* 2.

Frutex *juniperinus, erectus, prolifero-ramosus;* rami *teretes, foliosi, subrubentes,* ramulis *corymboso-approximatis virentibus cum pube minutâ, apice floriferis.* Folia *sparsa, proxima, imbricato-patentia, crassiuscula, strictiuscula, lineari-subulata, cartilagineo-mucronata, subtùs carinato-convexa punctisque glandulosis biseriato-notata; villoso-ciliata, cæterum glabra, semuncialia ad uncialia usque, suprà plana:* pet. *brevis, appressus, complanatus, pallidus.* Cymulæ *terminales, paucifloræ;* flores *albo-rubentes, parvuli, erecti, ut et folia odorem strenuum herbaceo-resinosum spirantes;* pedunculi *in summis foliis axillares iisque subæquales, bis terve divisi, erecti, teretes, lanuginosi;* pedicelli *brevissimi* bracteis *trinis pallentibus ad basin.* Cal. *lanuginosus, duplo brevior corollâ magisve, patens, segmentis ovato-acuminatis apice roseis.* Petala *campanulato-patentia, obovato-oblonga, sessilia, planiuscula, æqualia, apice rotundata, disco glanduloso calycis inserta.* Stam. 5, *petalis breviora et cum iis in plano eodem extra coronam inserta, primò inflexa indè successivè arrigenda atque divaricanda;* sterilia *nulla:* fil. *subulata, rubentia;* anth. *ovatæ, erectæ, à basi infixæ, introrsæ,* glandulà *minutâ concolori ex erectâ reflectendâ præfixæ, primò roseo-rubentes denuo nigricantes,* polline *grumoso, aureo-flavescente.* Germ. 5, *supera, in stellam connexa, pallido-virentia, intra* coronam *concavam 5-lobo-plicatam recondita:* stylus *cylindricus, pallidus, crassiusculus, inflexo-arrigendus, staminibus æqualis;* stigma *subcapitato-obtusum.*

A species of that group which, according to Willdenow, should alone constitute the true DIOSMA; but which in our view connects too naturally and conveniently with the others that have been detached from it by that botanist to induce us to regard it as usefully separable.

Native of the Cape of Good Hope; and recorded as having been cultivated by Miller, in 1752.

The blossom is sometimes wholly white.

A proliferously branching upright shrub, something like a Juniper; *branches* round, leafy, reddish; *branchlets* green with a fine down, corymbose, bearing the flowers at the top. *Leaves* scattered, closish, imbricately spreading, thickish, linearly subulate, cartilaginously pointed, keeled and convex beneath, with two rows of glandular dots; villously fringed, otherwise smooth, from ½ an inch to an inch long, flat at the upper side: *petiole* short, close-pressed, flattened, pale. *Cymules* few-flowered, terminal; *flowers* whitish red, small, upright, with a strong resinous scent like that in the leaves; *peduncles* in the axils of the topmost leaves, and about the same length with them, once or twice divided, upright, round, downy; *pedicles* very short, with 3 pale *bractes* at the base. *Calyx* downy, twice shorter than the corolla or more, spreading, with ovately acuminate segments rose-red at the end. *Petals* campanulately spreading, obovately oblong, sessile, flattish, even, rounded at the top, inserted on the glandular disk of the calyx. *Stamens* 5, shorter than the petals and inserted on the outside of the coronal disk at the same point with them, at first inflected, then extending themselves straight, one after the other, when they become divaricate; *sterile ones* none: *filaments* subulate, red; *anthers* ovate, upright, fixed on at the base, facing inwards, surmounted by a small gland of the same colour as themselves originally standing upright but afterwards bending flat back along the anther, at first rosy red, at last black; *pollen* grumous, golden-yellow. *Germens* 5, superior connected together so as to form a star, pale green, lying within a hollow *crown* with five lobelike plaits: *style* cylindrical, pale, thickish, from inbent becoming upright and straight, equal to the stamens; *stigma* subcapitately obtuse.

A hardy greenhouse shrub.

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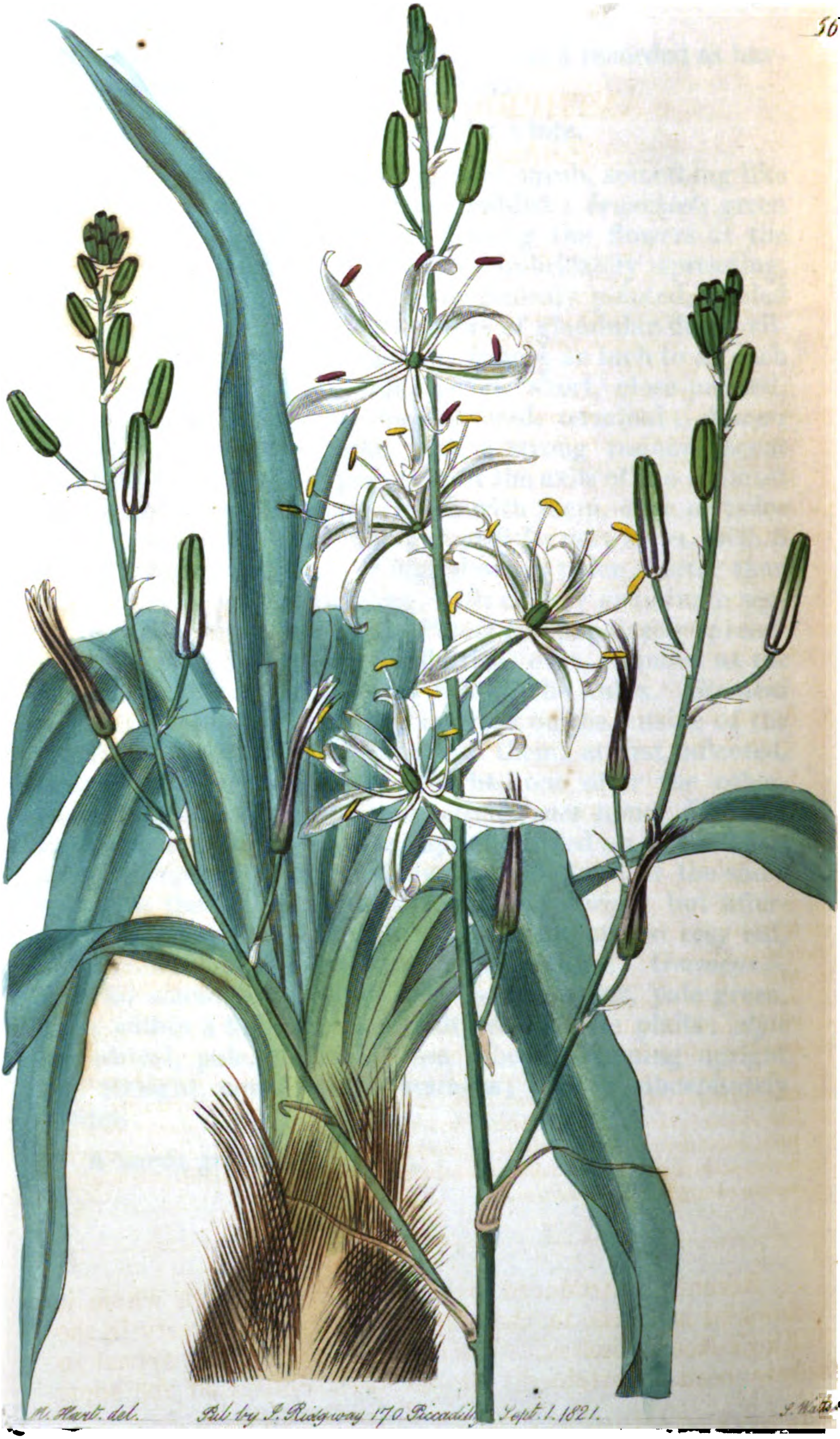

W. Hart. del. Pub by J. Ridgway 170 Piccadilly Sept. 1. 1821. J. Watts sc.

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ANTHERICUM pomeridianum.

Postmeridian Anthericum.

HEXANDRIA *MONOGYNIA.*

Nat. ord. ASPHODELI. *Jussieu gen.* 51. *Div. II.* Flores spicati. Radix fibrosa. Calyx sexpartitus, basi staminifer.
ASPHODELEÆ. *Brown prod.* 1. 274.

ANTHERICUM. *Cor.* sexpartita, patens, æqualis, decidua. *Fil.* (omnia v. interiora) barbata. *Anth.* versatiles. *Germ.* loculis polyspermis. *Stylus* filiformis. *Stigma* subpapulosum. *Caps.* subglobosa, 3-loc., 3-valvis, valvis medio septiferis. *Sem.* pauca, angulata, umbilico nudo.

Herbæ *sæpè annuæ.* Radix *fasciculato-fibrosa, rariùsve tuberosa.* Folia *linearia, canaliculata, sæpè carnosa.* Racemi *simplices.* Pedunculi *solitarii, cum calyce articulati.* Flores *erecti, flavi.* Stam. *sæpè declinata.* Filamentorum *barba laxa.* Embryo *in quibusdam rectus.* Brown prod. 1. 275.

OBS. Corolla *sæpè emarcido-persistens.* Filamenta *interdum nuda.* Germinis *loculamenta modò disperma.* Flores *colore varii.* Capsula *nunc oblonga.* *In* PHALANGIO *proximo* antheræ *erectæ à basi insertæ,* stylus *supernè versus incrascescens,* pedunculi *infra calycem nequaquàm cum illo articulati.*

A. *pomeridianum,* foliis flaccidiusculis lato-subulatis, triquetro-canaliculatis cum carinâ acutâ, glaucis margine nervisque (suprà) scabris; caule paniculato-ramoso: filamentis imberbibus.

Anthericum pomeridianum. *Nobis in journ. of science and the arts.* 1. 181.

Scilla pomeridiana. *Decand. hort. monsp.* 148. *n.* 195. *Redouté liliac.* 8. *t.* 421.

Rhizoma *bulbiceps tunicis fuscis grossiùs fibroso-contextis subvaginantibus vestitum.* Folia *radicalia, scirpoideo-triquetra, lenta, plura, ambientia, exteriora longiora, sesqui-bipedalia, suprà glauca nervisque scabris striata, ultimis lateribus revoluta, subtùs glabra virentia.* Flores *pomeridiani, fugaces, teneri, convoluto-emarcescentes, albi, inodori.* Pedunculi 1-*flori, virides, teretes, glabri:* corolla *diametro subsesquiunciali, sexpartita, recurvo-radiata, infernè connivens, laciniis lineari-ligulatis, obtusis, supernè distantibus, vittâ mediâ dorsali è viridi atque purpureo sordescente notatis, interiorbus sublatioribus obtusioribusque.* Stam. *corollæ æqualia, erecto-divergentia:* fil. *basi laciniarum brevissimè adnata, filiformi-subulata, glabra, infernè subdilatata intùsque subcanaliculata:* anth. *lineari-oblongæ, violaceo-fuscatæ,* polline *luteo.* Germ. *viride, oblongum, supernè angustatum, pluriès brevius stylo, rotundatè 3-gonum, lineis 6 pallidioribus notatum, loculis subdispermis.* Stylus *setaceus, cum curvo leni subascendens, staminibus æqualis, puncto stigmatoso emarginato terminatus.*

Recently introduced by Messrs. Colvill, with whom it flowered last June in the greenhouse of their nursery in the King's Road, Chelsea. The native place does not appear to have been ascertained. It has been cultivated for some

years past in the Botanic garden at Montpellier, where it had been obtained from a collection at Bourdeaux. It has been referred to Scilla by M. De Candolle, and specifically named by that celebrated botanist, from the circumstance of the blossom expanding after mid-day.

We suspect the plant to be of the same species with a dilapidated sample from the Cape of Good Hope, preserved in the Banksian Herbarium under the title Anthericum *scabrum;* but from the imperfect state of the specimen we offer our opinion as a mere guess.

Rootstock bulbicipitous (terminated by a bulblike bud), with brownish fibrous coarsely reticulated integuments. *Leaves* radical, bullrush-shaped, several, ambient, somewhat flaccid, broadly subulate, 3-sided, channelled with a sharp keel beneath, glaucous at the upper surface and streaked with shagreenly roughened nerves, outer ones about a foot and a half long, revolute along the edge, smooth and green underneath. *Flowers* fugitive, tender, twisting their segments together as they decay, white, scentless. *Peduncles* one-flowered, green, round, smooth: *corolla* about an inch and a half across, sixparted, recurvedly stellate, converging downwards; segments linearly ligulate, obtuse, upwards wide apart, marked down the middle of the back by a purplish green line, inner ones rather broader and blunter. *Stamens* even with the corolla, uprightly divergent: *filaments* very shallowly fixed to the base of the segments, filiformly subulate, smooth, somewhat widened downwards and inwardly channelled. *Germen* green, oblongly tapered, several times shorter than the style, roundedly 3-cornered, and marked with six paler lines; cells 2-seeded: *style* setaceous, inclining slightly upwards with a gentle curve, even with the stamens; terminated by an inconspicuous notch for the stigma.

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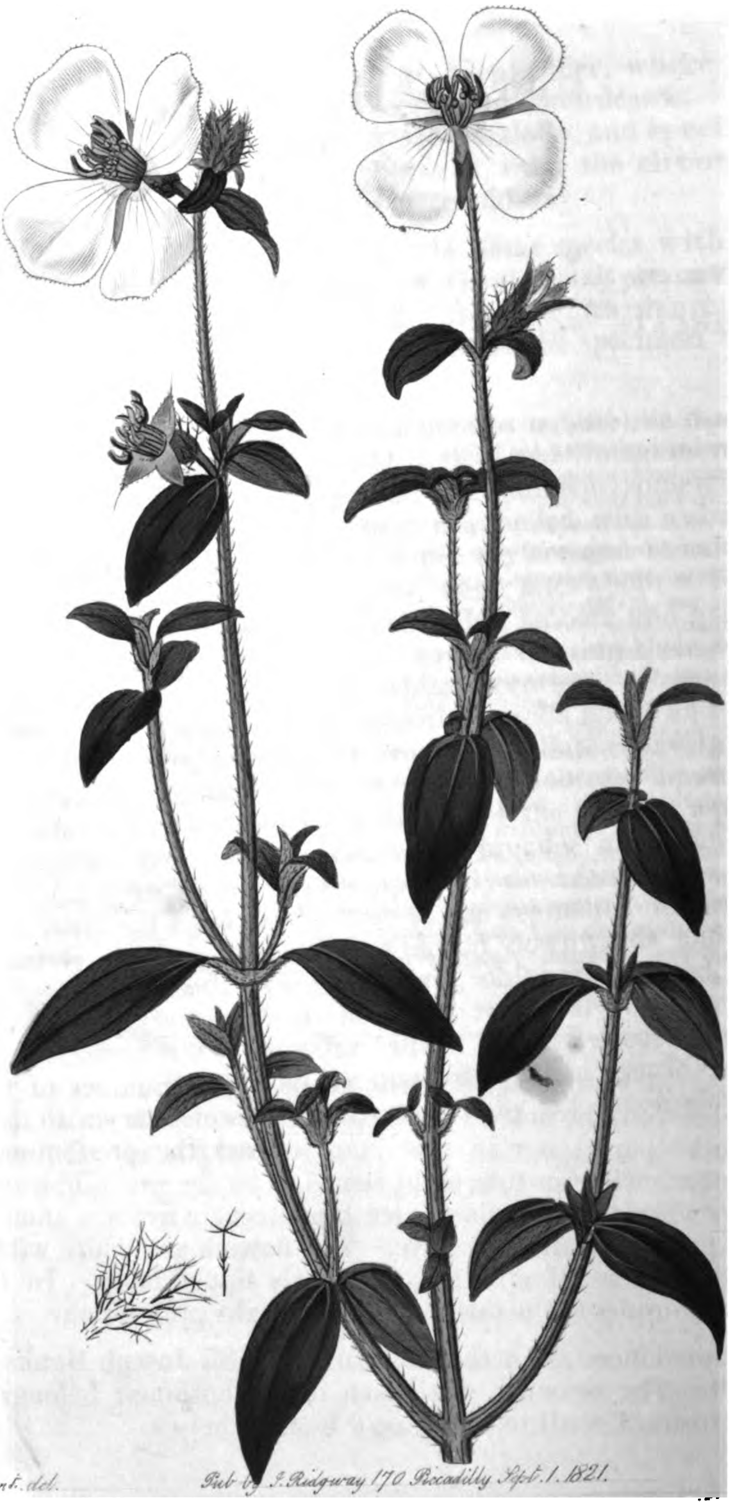

C. Hart. del. Pub by J. Ridgway 170 Piccadilly Sept. 1. 1821. Watts sc.

OSBECKIA zeylanica.

Ceylonese Osbeckia.

OCTANDRIA *MONOGYNIA.*

Nat. ord. Melastomæ. *Jussieu gen.* 328. *Div. II.*
Melastomaceæ. *Brown bot. of congo.* 15.
OSBECKIA. *Suprà fol.* 542.

O. *zeylanica,* foliis petiolatis calycibus hispidis. *Willd. sp. pl.* 2. 300.
Osbeckia zeylanica. *Linn. suppl.* 215. *Hort. Kew. ed.* 2. 2. 340.
Echinophora maderaspatana, sideritis non serratis nervosis foliis, fructû capsulari Caucalidis æmulo. *Pluk. alm.* 132. *t.* 173. *f.* 4.

Frutex *appressè strigosus;* rami *oppositi, axillares, erecti,* 4-*goni, bisulcati, ad sulcorum marginem saturatiùs virentes.* Folia *opposita, decussato-distantia, ovali-lanceolata, patentia,* 3-*nervia, setulis decumbentibus strigosa:* pet^{1}. *breves, strigosi, basi lineâ prominulâ setis longioribus porrectis ciliatâ utrinque connexi.* Cymæ *terminales pauci(*5*)floræ, foliis* 4 *subtensæ, bracteatæ, floribus subsessilibus albis v. carneo-subrubentibus, diametro unciali ad sesquiuncialem.* Cal. *virescens semi-*4-*v.* 5-*fidus;* tubus *extùs spinis viridibus radiato-compositis patentibus muricatus;* segmenta *ovato-oblonga, acuminata, ciliata, longitudine fermè tubi, setâ longiori simplici præfixa, spinâ externarum conformi insterstincta, cæterum glabra atque enervia.* Petala 4-5, *lato-obovata, deorsum cuneata, pube minutâ rubro-capitatâ fimbriata.* Stam. 8-10, *corollâ breviora, alterna (ubi* 10), *subbreviora, effœtiora v. tardiora;* fil. *virentia, filiformia;* anth. *lineari-attenuatæ, articulato-affixæ, flavæ, ad ventrem violaceo-tinctæ, erostres, apice foratæ, loculi* 2 *receptaculo basi incurvato intùsque didymo-protuberante adnati.* Germ. *pallidè virens, ellipticum, glabrum,* 4-(5-) *loculare, setis* 8-(10, *pare uno pro singulo loculo) simplicibus circa basin styli præfixum:* stylus *virens, cylindricus, robustus, glaber, obsoletè curvatus;* stigma *apex obtusus papulosus.*

As in Osbeckia *chinensis* of the 542d number of this publication, the flowers in the present species vary with from 8 to 10 parts; but in that, ten seemed the predominant number, while in this, eight seems to be the prevailing one. Here when the stamens are ten the alternate five are smaller and paler than the other five. The flowers are white with a purple fringe of minute glandularly tipped hairs. In the dried samples the petals appear of a light pink colour.

Introduced from the East Indies by Sir Joseph Banks in 1799. The drawing was taken in the hothouse belonging to Messrs. Colvill in the King's Road, Chelsea.

A strigosely pubescent *shrub; branches* opposite, axillary, upright, 2-furrowed, and of a deeper green at the edges of the furrows. *Leaves* opposite, decussately wideset, ovally lanceolate, spreading, 3-nerved, with a short stiff decumbent fur: *petioles* short, strigose, connected on each side by a slight ridge bearing a line of longish outstretched bristles. *Cymes* terminal, few (5) flowered, with a kind of 4-leaved involucre, bracteate, with white or pinkish subsessile flowers of about an inch or an inch and a half in diameter. *Calyx* green, half 4 or 5-cleft; *tube* muricated on the outside, spines green spreading and radiately compound; *segments* ovately oblong, taper-pointed, fringed, nearly of the length of tube, surmounted by a long simple seta, separated by a spine in the fork of each division, otherwise smooth and without nerves. *Petals* 4-5, broadly obovate, cuneately tapered downwards, fringed at the upper edge. *Stamens* 8-10, shorter than the corolla: *anthers* linearly tapered, deep yellow, stained with purple on the inner side, beakless, perforated at the top, *loculaments* 2 adhering to the front of the receptacle which turns up and is didymously protuberant at the base. *Germen* smooth, 4-5-celled surmounted by 3-10 setæ at the end round the base of the style, 2 setæ being allotted to each cell; *style* green cylindrical, slightly curved.

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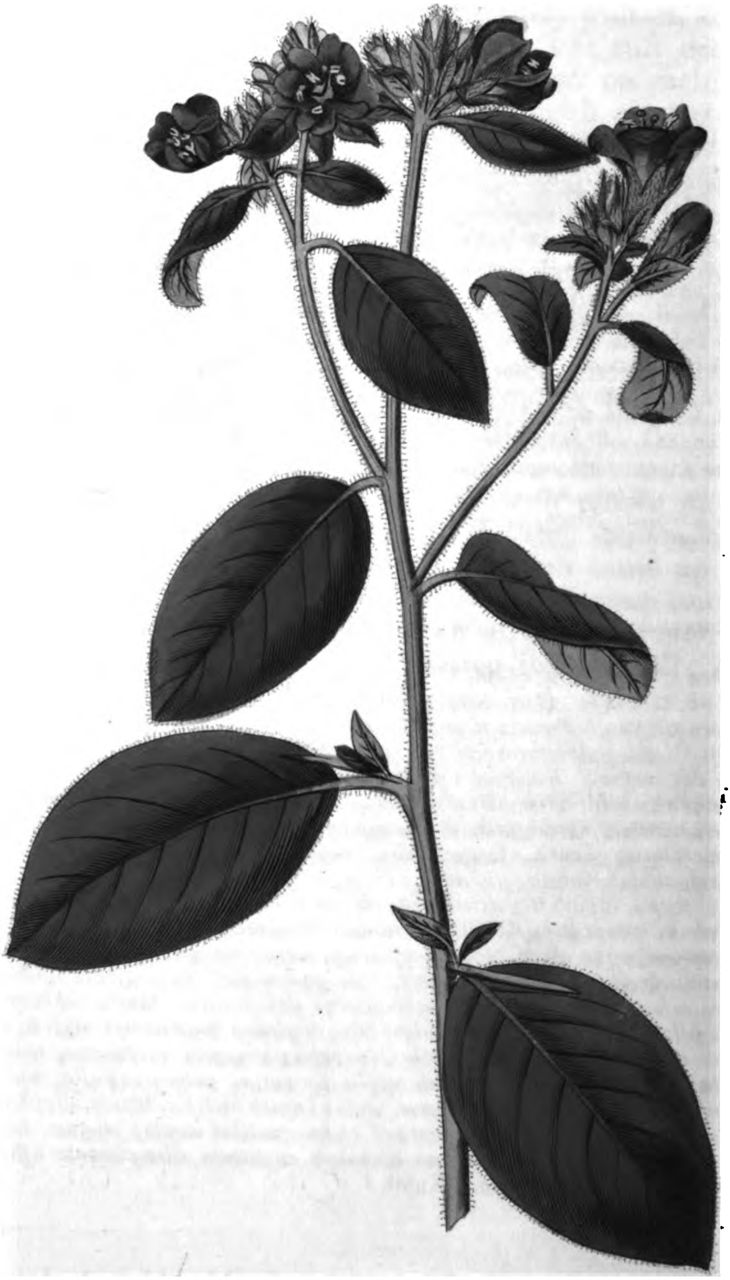

Hart. del. Pub. by J. Ridgway 170 Piccadilly Sept 1. 1821. Watts sc.

HYDROLEA spinosa.

Thorny Hydrolea.

PENTANDRIA *DIGYNIA.*

Nat. ord. CONVOLVULI. *Jussieu gen.* 132. *Div. II.* Styli plures.
HYDROLEACEÆ. Ordo *Polemoneaceis* affinior quam *Convolvulaceis. Brown bot. of congo.* 32.

OBS. *Corrugatio cotyledonum definito seminum numero semper comitata est, ideoque ex* Convolvulaceis *amandavi* HYDROLEAM, NAMAM, SAGONEAM *et* DIAPENSIAM, *utroque charactere orbatas; necnon* RETZIAM *cujus semina pauciora subdefinita, sed embryone recto, teretiusculo intra albumen carnosum incluso instructa, et habitus diversissimus.* Brown prod. 1. 482.

HYDROLEA. *Cal.* 5-partitus, persistens. *Cor.* rotato-campanulata, limbo 5-rariùs 6-aut 7-fido, patente. *Stam.* 5, inclusa. *Filamenta* basi dilatata. *Anth.* sagittatæ. *Styli* 2, rariùs 3. *Stigmata* truncata. *Caps.* subglobosa, 2-rariùs 3-locularis, loculicido-bi-rariùs trivalvis; *placentæ* 2, rariùs 3 (una in quolibet loculamento), magnæ, hemisphæricæ, per lamellam dorsalem in axi capsulæ ad dissepimentum affixæ, ubique seminiferæ.

Herbæ *suffruticosæ, spinosæ, piloso-glutinosæ, spinis axillaribus.* Folia *alterna integra.* Flores *axillares et terminales cærulei.* Kunth nov. gen. et spec. 3. 98.

H. *spinosa,* floribus terminalibus, subcorymbosis; capitellis hirtellis. *Kunth nov. gen. et spec.* 3. 98.
Hydrolea spinosa. *Lin. sp. pl.* 1. 328. *Aubl. guian.* 1. 281. *t.* 110. *Willd. sp. pl.* 1. 1327. *Hort. Kew. ed.* 2. 2. 106.
Hydrolea trigyna. *Swartz fl. ind. occid.* 1. 558. *Willd. sp. pl.* 1. 1327.
Spina di Vagra. *Araguensium; (fide Kunth).*
Hierba del cancer. *Popayanensium; (fide Kunth.)*

Frutex *ramis hirsutis.* Præfloratio *imbricata.* Cal. *profundè 5-rariùs 6-partitus, externè pilosus pilis diaphanis, septis transversis articulatis; laciniis lanceolatis, acutis, integerrimis, subinæqualibus, 1-nerviis, viridibus.* Cor. *campanulato-rotata, glabra, cærulea, calycem superans;* tubo *brevi infundibuliformi;* limbo 5-*partito, patente, laciniis subrotundo-ovatis, obtusis, integerrimis, æqualibus, flabellato-venosis.* Stamina *medio tubo inserta, corollâ breviora, æqualia;* fil. *lineari-subulata, membranacea, glabra, basi dilatata;* anth. *dorso affixæ, incumbentes, oblongo-lineares, obtusæ, basi bifido-sagittatæ, biloculares, longitudinalitèr internè dehiscentes.* Germ. *oblongum, supernè pilosiusculum,* disco *orbiculari integro glabro impositum:* styli 2, *longitudine staminum, filiformes, glabri, cærulei;* stigmata *incrassata, obliquè truncata.* Caps. *subglobosa acuta stylis coronata, calyce suffulta eumque subæquans, magnitudine Pisi majoris, glabra, apice hirtella, tenuis, diaphana, bilocul., loculicido-bivalvis; placentæ* 2 (1 *in quolibet loculo) magnæ, hemisphæricæ, verrucosæ, per lamellam dorsalem angustam dissepimento affixæ:* sem. *creberrima, minutissima.* Kunth l. c.

Introduced from the West Indies by Mr. Alex. Anderson in 1791; and lately received from the Brazils by Mr. Lee

of the Hammersmith Nursery, where our sample flowered this summer in the hothouse.

It was found at Vera Cruz by Dr. Houstoun, by Aublet in Guiana; and lastly by Messrs. Humboldt and Bonpland in the vallies of Aragua at the height of 240 fathom above the level of the sea, and in the province of Popayan at the height of 500 fathoms.

The order *Hydroleæ* was detached from *Convolvulaceæ* by Mr. Brown; differing by the absence of the remarkable wrinkles that distinguish the seedlobes of the latter, and the presence of which has been found by that eminent botanist constantly to announce a fruit with a small and limited number of seed, while its absence in the *Hydroleæ* (in truth more closely allied to *Polemoniaceæ)* announces a fruit with an indefinite number of seed. But besides the above technical differences, the habits of the two orders are very distinct.

A subshrubby thorny plant, with a clammy fur; *thorns* axillary. *Leaves* alternate, entire. *Flowers* both terminal and axillary, imbricately folded before expansion. *Calyx* deeply 5–(seldom 6) parted, furred on the outside; hairs transparent and jointed; segments lanceolate, pointed, entire, slightly uneven, 1-nerved, green. *Corolla* campanulately rotate, smooth, overtopping the calyx; *tube* short, funnelled; *limb* 5-parted, spreading, segments roundishly ovate, obtuse, entire, even, with fanwisely disposed veins. *Stamens* inserted at the middle of the tube, shorter than the corolla, even; *filaments* linearly subulate, membranous, smooth, widened at the base; *anthers* fixed on at the back, balanced, oblongly linear, obtuse, sagittately bifid at the base, 2-celled, bursting longitudinally. *Germen* oblong, slightly furred at the top, placed upon an orbicular entire smooth disk (fleshy basement): *styles* 2 (sometimes 3) the length of the stamens, filiform, smooth, blue; *stigmas* thickened slantingly truncated. *From the latin of M. Kunth.*

[illegible] Ridgway 169 Piccadilly [illegible] 1831.

BRUNSVIGIA toxicaria.

Fan-leaved Brunsvigia. Poison-bulb.

HEXANDRIA *MONOGYNIA.*

Nat. ord. NARCISSI. *Jussieu* 54. *Div. II.* Germen inferum.
AMARYLLIDEÆ. *Brown prod.* 1. 296. *Sect. I.* Radix bulbosa. Flores spathacei umbellati, rarò solitarii.

BRUNSVIGIA. Suprà vol. 3. *fol.* 192; *(ubi pro* "filamenta inclusa," *legendum* "filamenta inclusa vel exserta").

B. *toxicaria,* umbella crebra, florifera hemisphærica conferta; fructifera sphærica laxa scapum subexcedente; corollâ infundibuliformi regulari; foliis plurimis erectis lorato-elongatis acuminatis obliquis glaucis margine lævi: staminibus erecto-divaricatis subexsertis.

Brunsvigia toxicaria. *Nobis suprà vol.* 2. *fol.* 139, *pag.* 3, *in notâ; et vol.* 3. *fol.* 192, *pag.* 4. *in spec. enum.*

Hæmanthus toxicarius. *Hort. Kew.* 1. 405. *ed.* 2. 2. 208. *Thunb. prod.* 59. *Willd. sp. pl.* 2. 27. *Jacq. fragm.* 36. *n.* 116. *tabb.* 39 *et* 40. *fig.* 1.; *(figg. è speciminibus spontaneis siccatis desumptæ). Nobis in Curtis's magaz.* 1217. *Lichtenstein reise in sudl. afr.* 2. 321.

Amaryllis disticha. *Linn. suppl.* 195. *Paterson's travels* 51; *cum icone pessimâ. Burchell cat. geogr.* 4194.

Bulbus *tunicatus, ovato-oblongus, integumentis innumeris tenuibus fibroso-membranaceis corticato-compactis vestitus, diametro nunc brachii vel duplo majore, scapo altior.* Folia *bifaria, plurima, erecto-divergentia, lorato-elongata, lanceolato-acuminata, glauca, obliquata, flore tardiora.* Scapus *foliis præcocior, robustus, vix umbellâ longior, tereti-compressus hincque planior, glauco-pallescens.* Spatha *numerosiflora, bivalvis, pedunculis æqualis, valvis ovato-oblongis, acuminatis, recurvandis:* pedunculi bracteis *tenuissimis distincti, triquetro-filiformes, pennâ passerinâ paulò crassiores, virentes, nitidi, cum germine clavato-continui,* floriferi 2*unciales v. parum longiores,* fructiferi 4-6-*unciales.* Flores *carneo-pallentes, fœnum recens gratè redolentes:* cor. 1¼ *unciæ parùm exsuperans, revoluto-infundibuliformis, regularis;* tubus *strictus, rectus, crassus (diametro ferè pennæ scriptoriæ mediæ magnitudinis), chloroleucus, germini subæqualis, limbo plus duplo brevior;* limbus 6-*partitus, turbinato-revolutus, laciniis stellato-distantibus, angustè ligulatis, æquilongis, acutis,* exter. 3 *subangustioribus convoluto-canaliculatis, hamato-mucronatis mucrone basi subpubente,* inter. *planioribus obsoletè mucronatis.* Stam. *exserta, æqualia, erecto-patentia, curvula,* fil. *alba, subulato-filiformia, tubum prominentèr decurrentia:* anth. *versatili-incumbentes, angusto-oblongatæ, primò carneo-rubentes, defloratis purpureo-fuscescentibus;* pollen *ochroleucum.* Stylus *staminibus æquilongus, sesquiuncialis,* ¼ *longior corollâ, albicans, inclinato-erectus, gracilis, triquetro-filiformis;* stigma *apex inconspicuus simplicissimus.* Germ. *angustè turbinatum v. trigono-clavatum angulis acutè compressis, estriatum, ter quaterve pedunculo brevius,* loculamentis *collaterali-(biseriato-)dispermis* ovulis *albis rotundis.* Caps. *bulbisperma,* seminibus *tuberoso-laxatis subrotundis albidis magnitudine ferè Pisi.*

Plants of this fine species have been pretty common in our collections for fifty years past; but it is believed that not more than one or two have blossomed during that period. In the magnificent gardens of Schoenbrunn, near Vienna, where the cultivation of the Cape *Liliaceæ* has been carried on upon a larger scale and with more success than in any other, no plant of this species has ever been known to flower: and its nearest congener *ciliaris*, also pretty common in the European collections, appears never to have produced its bloom even in a single instance.

The bulb of our sample was presented to H. R. H. Prince Leopold of Cobourg, with many others, by Mr. Burchell, on the return of that gentleman from his expedition into the interior of South Africa, and flowered in May last in the hothouse at Claremont, where it ripened its fruit in July. From thence we were favoured with the specimen for the use of this work.

We have to thank Mr. Burchell for the obliging communication of the following memorandum concerning the species. "It is a plant of frequent occurrence in the more "arid districts of Southern Africa, growing both in sandy "plains and rocky spots on the banks of the Bushmen's "River at Rautenbach's Drift. It is also found on the "great sandy plains of Litaakun. I have been assured by "the Bushmen themselves that the juice of the bulb is *one* "of the ingredients most commonly used in the poisonous "composition with which the heads of their arrows are co-"vered. The wild antelopes seem carefully to avoid brows-"ing the leaves of this plant, as I have observed it always "left untouched, although the surrounding herbage has "been grazed over."

In the German edition of Lichtenstein's Travels in South Africa we find another account of the Bushmen's poison for their arrows. "The composition is of a brownish colour, and when fit for use sticky and of the consistence of wax, but soon becomes dry and hard. It is made by the mixture of several substances, the efficacy of which the Bushmen have learned by experiments upon living animals. The principal ingredient is always the poison taken from snakes, which being of itself too fluid and volatile for their use, is incorporated with the juice of a large kind of Spurge (EUPHORBIA), by which it acquires the waxy consistence already noticed. To this mass is generally added the expressed juice of the bulb of HÆMANTHUS (BRUNSVIGIA) *toxicarius*, an alkali supposed to add most powerfully to the activity of the poison, and known in the colony by the Dutch name of *Bolletje*'s *Gift* (bulb-poison.)"

The bloom of this species, which is of a dull pink, diffuses a grateful fragrance, not unlike that of new-made hay. The umbel which at first is hemispherical and close, by the time the fruit is ripened, has become loose and completely globular, having lengthened the footstalks to twice or thrice the length they were at when in flower. The stem, as is usual in the genus, is dwarf in proportion to the rest of the plant.

Bulb tunicate, ovately oblong, coated by a thick rind formed by innumerable thin fibrously membranous integuments (the probable accumulation of ages) of the thickness of a man's arm or more, and deeper than the stem is high. *Leaves* several or many, bifarious, uprightly spreading, lorately elongated, lanceolate and taper-pointed, glaucous, oblique, coming after the flowers. *Scape* robust, hardly longer than the umbel, roundedly compressed and flatter on one side, pale and glaucous. *Spathe* 2-valved, even with the footstalks, valves ovately oblong, taper-pointed, reflexed; footstalks filiform, 3-cornered, rather thicker than the tube of a sparrow-quill, green, shining, clavately continuous with the germen, *flowerbearing* about 2 inches or little more in length, *fruitbearing* from 4 to 6 inches long. *Umbel* numerously flowered: *corolla* about 1¼ inch in diameter, revolutely funnelform, regular; *tube* stiff, straight, thick, greenish white, about the length of the germen, more than twice shorter than the limb; *limb* 6-parted, turbinate and revolute, segments standing starwisely apart, narrowly ligulate, even in length, pointed, 3 *outer ones* rather the narrowest, convolutely channelled, with a barbedly-hooked point slightly downy at the base, *inner ones* flatter and obsoletely mucronate. *Stamens* protruding, even, uprightly spreading, slightly curved; *filaments* white, subulately filiform, prominently decurrent along the tube: *anthers* balanced and traversing, narrowly and elongatedly oblong, at first pink, afterwards of purplish black; *pollen* cream-coloured. *Style* even with the stamens, 1½ inch long, ¼ longer than the corolla, from upright inclining, slender, filiorm, 3-cornered; *stigma* an inconspicuous point. *Germen* narrowly turbinate, sharply 3-cornered, 3 or 4 times shorter than the peduncle; *cells* two-seeded; *ovules* white, round, and disposed side by side. *Capsule* bulbispermous; *seeds* tuberous, about the size of a Pea.

Introduced from the Cape of Good Hope by Mr. Masson in 1774.

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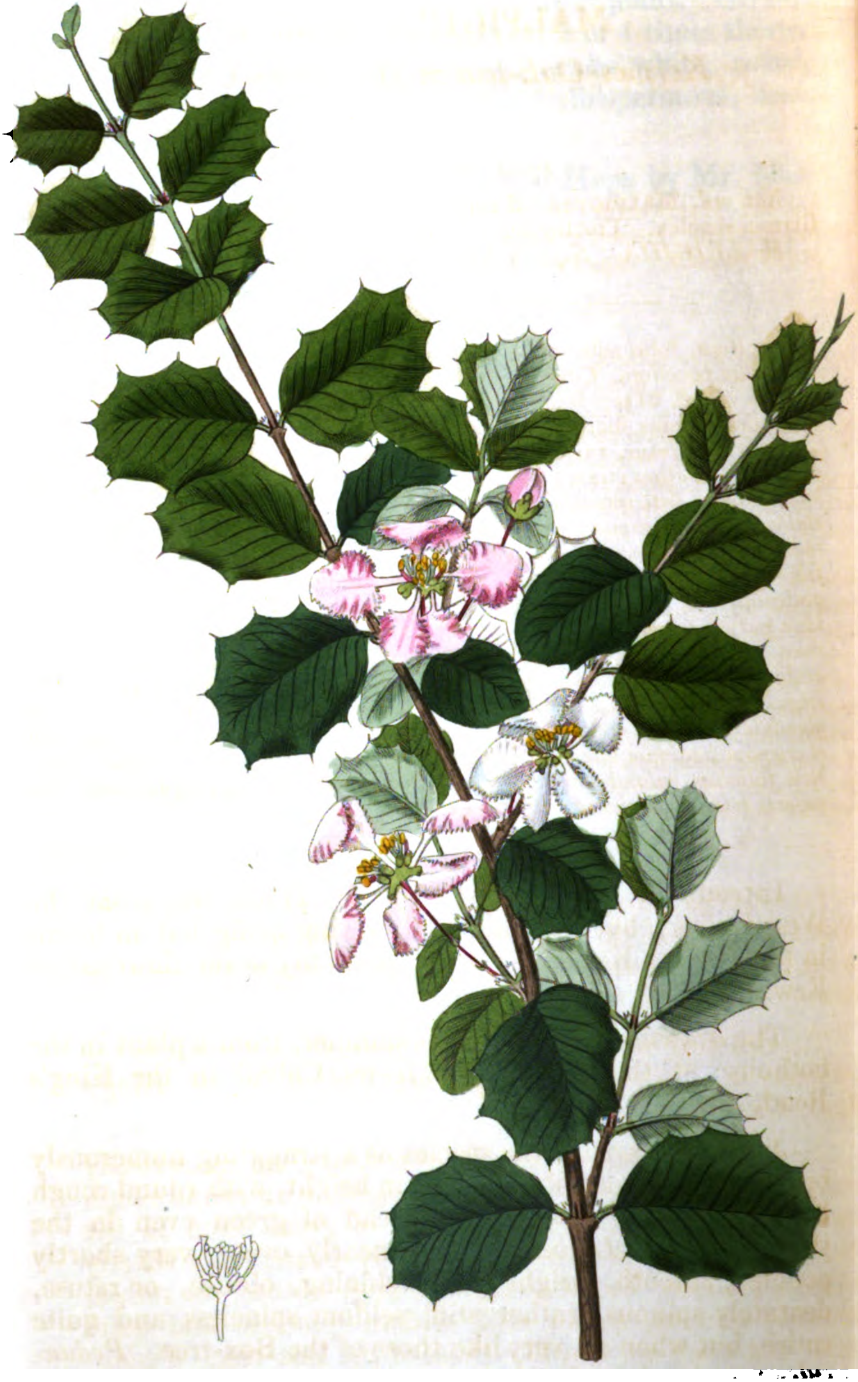

M. Hart. del. Pub by J. Ridgway 170 Piccadilly Sept. 1. 1821. J. Watts

MALPIGHIA coccifera.

Kermes-Oak-leaved Barbadoes-Cherry.

DECANDRIA *TRIGYNIA.*

Nat. ord. MALPIGHIA (MALPIGHIACEÆ). *Jussieu gen.* 252. *Div. II.* Germen simplex. Fructus monocarpus.
MALPIGHIA. *Suprà vol.* 2. *fol.* 96.

M. *coccifera,* foliis subovatis dentato-spinosis. *Lin. sp. pl. ed.* 2. 1. 611.
Malpighia coccifera. *Cavan. diss.* 8. 408. *t.* 235. *fig.* 2. *Jacq. ic. rar.* 3. *t.* 470. *coll.* 2. 311. *Willd. sp. pl.* 2. 737. *Hort. Kew. ed.* 2. 3. 105.
Malpighia humilis, ilicis cocciglandiferæ foliis. *Plum. gen.* 46. *ic.* 168. *fig.* 2.

Frutex *diffusus, ramosissimus, sempervirens, 4-pedalis ramis teretibus, asperis, junioribus etiam fuscis.* Folia *opposita, subovata, brevissimè petiolata, glabra, lætè virentia, nitida, parva, obtusa v. retusa, dentato-spinosa, rigidula, rarò inermia integerrima Buxoque tunc simillima.* Pedunculi *in ramulis brevibus terminales, tum etiam alii axillares, longitudine plùs minùs foliorum, solitarii vel gemelli, plerumque uniflori, rariùs bifidi et biflori, geniculati, ad geniculum brevissimè bracteati, infrà hoc virescentes, suprà idem purpurascentes.* Flores *inodori.* Calyx *punctatus, virescens.* Petala *rosea.* Antheræ *luteæ.* Calycis *pentaphylli et parvi foliola sunt lanceolata, acuta, concava et erectiuscula; quorum duo proxima dorso duos glandulas oblongas singula gerunt; horum latus claudentia duo unicam; his intermedium glandulâ caret.* Petala *inæqualia ex longo gracilique ungue in subrotundam et crispam laminam latescunt quorum duo magis approximata locantur ad calycis foliolum eglandulosum.* Styli 3 *incurvati.* Bacca *magnitudine Pisi majoris trisulcata, rubra.* Semina *rugosa.* Jacq. coll. l. c.

Introduced before 1733, by Dr. Houstoun, from the West Indies; but the time of flowering being left in blank in the Hortus Kewensis, it has probably never flowered at Kew.

The drawing was taken this summer, from a plant in the hothouse at the nursery of Messrs. Colvill in the King's Road, Chelsea.

Jacquin describes the species as a straggling numerously branched evergreen about 4 feet in height, with round rough branches which are brown instead of green even in the young wood. *Leaves* opposite nearly ovate, very shortly petioled, smooth, bright-green, shining, obtuse, or retuse, dentately spinous, rather stiff, seldom spineless and quite entire, but when so, very like those of the Box-tree. *Peduncles* terminating the short branchlets, sometimes axillary,

MALPIGHIA coccifera.

-Oak-leaved Barbadoes-Cherry.

◆

ANDRIA TRIGYNIA.

IGHIACEÆ). Jussieu gen. 252. Div. II.

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MALPIGHIA coccifera.

lled Barbadoes Cherry.

ia gen. [illegible] Dia. II.

about the length of the leaves, solitary or in pairs, generally 1-flowered, kneed, very shortly bracteate at the knees, below which they are green though purple above. *Flowers* scentless. *Calyx* dotted, green. *Petals* rosy. *Anthers* yellow. *Segments* of the small 5-leaved *calyx* lanceolate, pointed, concave and upright; of these the two nearest to one another bear each two oblong glands on the back, while the two that close upon their sides have only one gland, and the one between these none. *Petals* unequal; *unguis* long and narrow; *lamina* nearly round and curled at the edge; two nearer to each than the rest and opposite to the segments of the calyx that has no gland. *Styles* 3, inbent. *Berry* of the size of a largish Pea, 3-furrowed, red. *Seeds* wrinkled.

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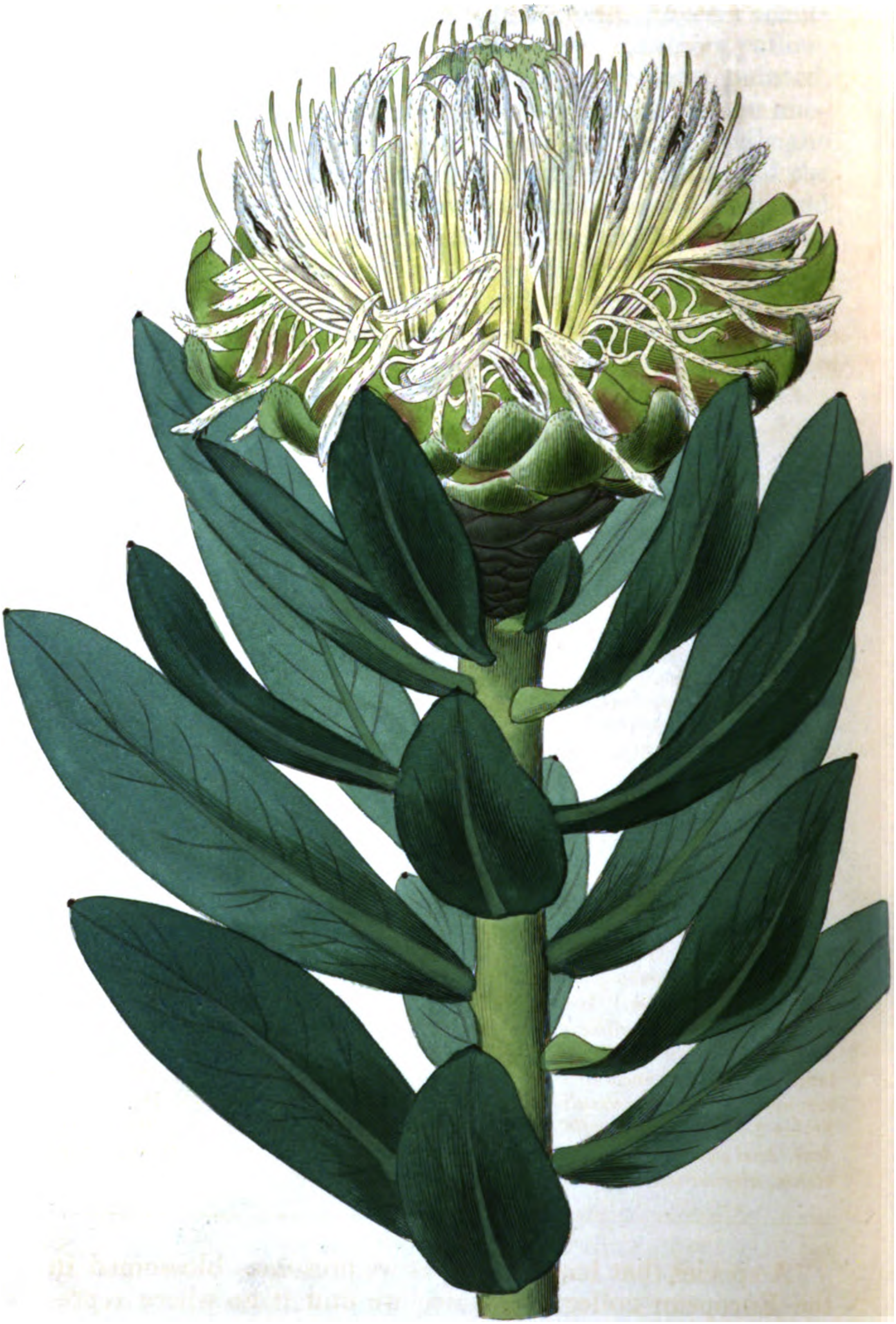

S. Hart del.   Pub. by J. Ridgway. 170 Piccadilly [illegible]   S. Watts sc.

PROTEA grandiflora; β; angustifolia.

Narrow-leaved great-flowered Protea.

◆

TETRANDRIA *MONOGYNIA.*

Nat. ord. Proteæ. *Jussieu gen.* 78. *Div. I.* Semen nudum aut fructus monospermus.

Proteaceæ. *Brown in trans. lin. soc.* 10. 15, *seqq. Div. I.* Fructus clausus. *Subdiv. A.* Antheræ distinctæ: à corollâ liberæ. *Flores hermaphroditi,* rarò polygami dioici, *stigmate* tunc verticali. *Antheræ* apicibus concavis corollæ immersæ. *Germ.* monospermum. *Nux* subcrustacea v. *Samara. Squamulæ* v. *glandulæ* 4 hypogynæ. *Cor.* irregularis, labiata, laciniis 3 (rarò omnibus) cohærentibus. *Brown.*

PROTEA. Suprà vol. 3. *fol.* 208.

Div. Capitula terminalia.

P. *grandiflora,* foliis oblongis sessilibus ramisque glabris, involucro hemisphærico imberbi nudiusculo, corollâ tomentosâ; unguibus dorso glabriusculis; aristis brevissimis, stylo glabro. *Brown in trans. lin. soc.* 10. 85.

Protea grandiflora. *Thunb. diss. n.* 51. *Ejusd. prod.* 27. *Willd. sp. pl.* 1. 530. *Lamarck illustr.* 1. 234. *n.* 1210. *encyc.* 5. 640. *Hort. Kew. ed.* 2. 1. 191.

Protea cinaroides *β. Lin. sp. pl. ed.* 1. 1. 92. *ed.* 2. 1. 136.

Protea foliis lanceolatis integerrimis flore patente glabro stylis longissimis. *Roy. lugd. bat.* 186.

Scolymocephalos foliis oblongis. *Weinm. phytanth.* 4. 286. *t.* 891.

Lepidocarpodendron; folio saligno lato; caule purpurascente. *Boerh. lugd. bat.* 2. 183*. *c. tab.*

Scolymocephalus foliis oblongis glabris crassioribus latioribus. *Herm. cat. mt.*

(β) Protea marginata. *Lamarck illustr.* 1. 235. *n.* 1225.

Obs. *Variat involucro penitùs glabro bracteisque exterioribus albo-tomentosis. Fol. quandoque lineari-oblonga et tunc ab icone* P. abyssinicæ *haud distinguenda.* Brown.

(β.) Folia *obscuro-glaucescentia, opaca.* Capitulum *diametro subtriuncialia, chloroleucum.* Involucrum *unciis* 2 *parùm profundius;* foliola *extùs lanugine sericeâ ex villis albis aliis cinnamomeo-coloratis commixtis pubescentia;* exteriora *brevia lanceolato-ovata, ciliata, extùs rufo-fuscescentia,* interiora *elongato-lanceolata, obtusiuscula, apice subciliata.* Corollæ *involucrum exsuperantes,* aristâ *subnullâ.* Anth. *ustulato-fuscescentes,* polline *ochroleuco.* Stylus 2-*uncialis, è corollâ longiùs extrusus, involucrum ½ parte saltèm excedens, basi obsoletè villosus, compressus.* Glandulæ hypogynæ 4. Recept. *convexum, alveolatum, diametro unciam parùm excedente.*

A species that has rarely, as we presume, blossomed in the European collections, since we find it no where repre-

sented from the cultivated plant. It was originally introduced by Mr. Masson, in 1787, from the Cape of Good Hope.

The sample of the present variety flowered last August in the greenhouse of Messrs. Colvill in the King's Road, where it had been raised from Cape seed.

Mr. Brown observes that the variety with linear oblong leaves is not to be distinguished from the figure of the Abyssinian Protea (Protea *abyssinica)* to be seen in Bruce's Travels under the vernacular name *Gaguedi*.

It comes the nearest to Protea *Scolymus*, and seems to have received the specific title of *grandiflora* in reference to that species, which is small-flowered for the genus, as several others with much larger flowers are familiar in our collections.

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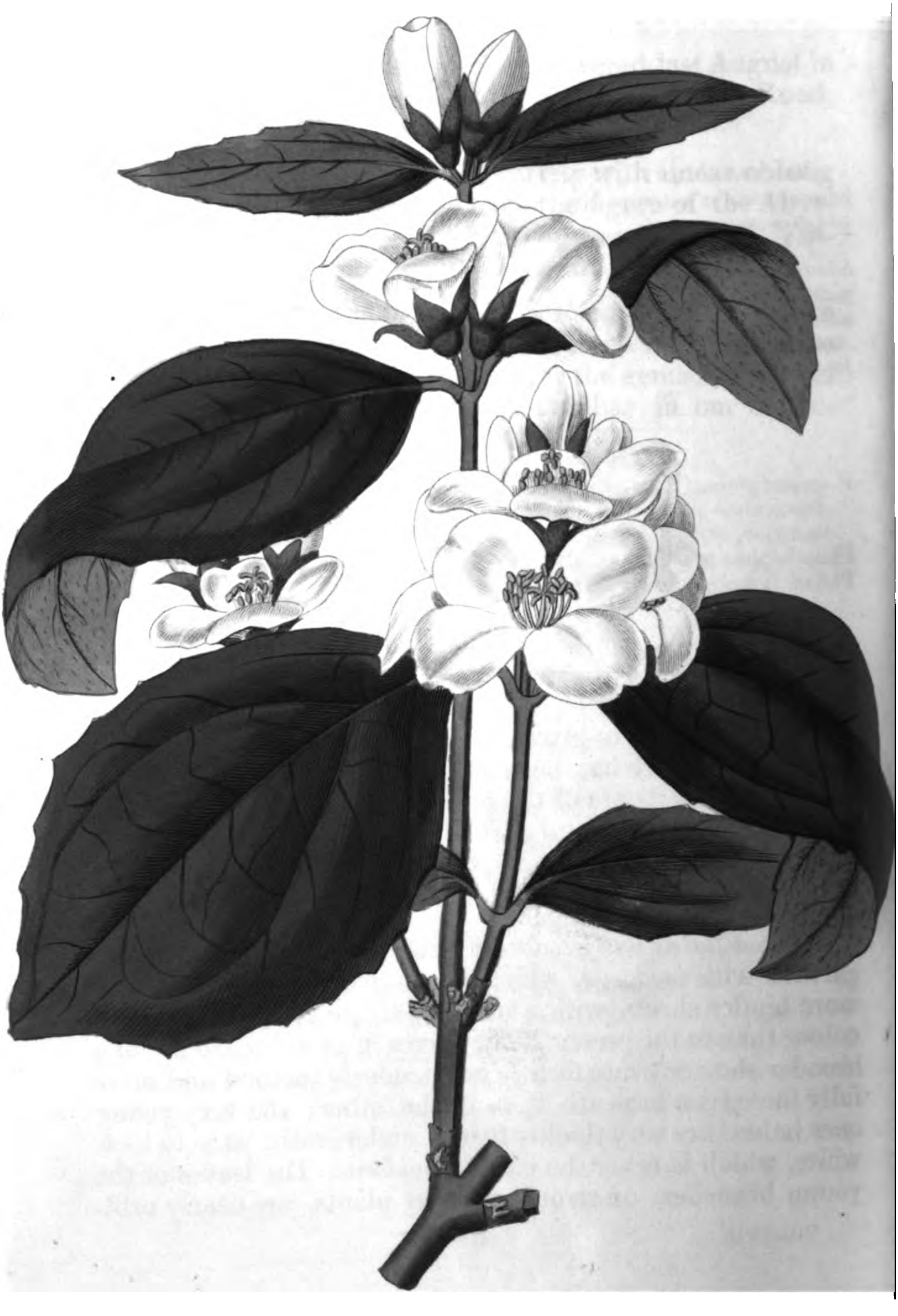

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PHILADELPHUS grandiflorus.

Large-flowered Philadelphus.

ICOSANDRIA *MONOGYNIA.*

Nat. ord. Myrti (Myrtaceæ). *Jussieu gen.* 322. *Div. I.* Flores in foliorum axillis aut in pedunculis multifloris oppositi. *Folia plerumque opposita et punctata.*

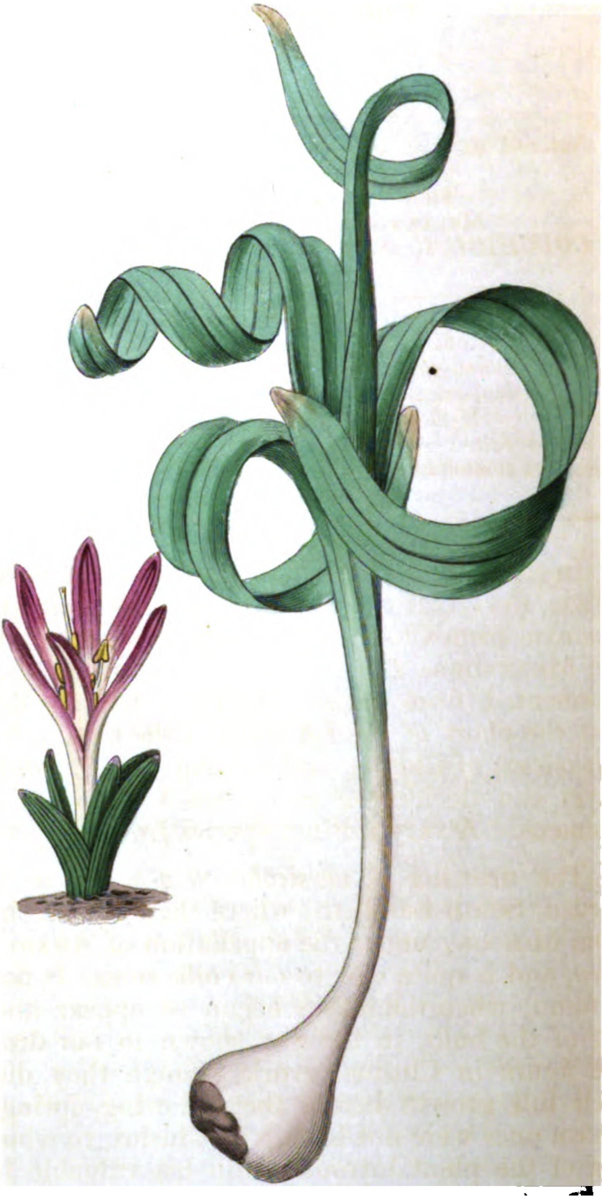
PHILADELPHUS. *Cal.* turbinatus 4-fidus. *Petala* 4. *Stigma* 4-fidum. *Caps.* ovata seminifera 4-locularis 4-valvis polysperma seminibus minutis. *Frutices aut arbusculæ; folia opposita non punctata; flores terminales corymbosi aut oppositè subspicati, singuli bracteolati, interdùm 5-petali cum fructû 5-loculari.* P. coronarii *stylus maturascente fructû 4-partitus.* Juss. l. c. 325.

P. *grandiflorus,* foliis ovatis acuminatis denticulatis, axillis venarum subtùs fasciculato-pilosis, calycis laciniis acuminatis, stylo staminibus longiore indiviso, stigmatibus 4-linearibus. *Pursh amer. sept.* 1. 329.
Philadelphus grandiflorus. *Willd. enum.* 1. 511. *Nuttall gen.* 1. 301.
Philadelphus inodorus. *Barton's elem. bot. (ed. lond.) app.* 28. *t.* 18. *fig.* 1? *(non aliorum).*

Said by Pursh to grow on river banks in South Carolina and Georgia. It has been for some time in our gardens; but we are not aware of the precise period when introduced. It is a hardy ornamental shrub. The native samples in the Banksian Herbarium, under the title *inodorus,* we suspect belong to the present species.

Grandiflorus has been very generally confounded in our gardens with *inodorus,* which is a scarcer, less robust, and more tender shrub, with a narrow foliage of a lighter green colour than in the present. The leaves in *grandiflorus* are of a broader shorter ovate form, conspicuously toothed and more fully furred underneath than in the other; the very young ones indeed are very thickly furred underneath, so as to look white, which is never the case in *inodorus.* The leaves of the young branches, on strong-growing plants, are nearly orbicular in *grandiflorus*, and in *inodorus* sometimes broadly ovate.

The drawing was taken at the nursery of Messrs. Colvill, in the King's Road; where the shrub is found to be quite hardy, and of the easiest cultivation.



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COLCHICUM versicolor.

Clusius's Meadow-Saffron.

HEXANDRIA *TRI-v. MONOGYNIA.*

Nat. ord. JUNCI. *Jussieu gen.* 43. *Div. IV.* Germina plura (sæpiùs tria). Capsulæ totidem uniloculares, interdùm basi coalitæ. Flores paniculati aut spicati.
MELANTHACEÆ. *Brown prod.* 1. 274.
COLCHICUM. *Suprà fol.* 541.

C. *versicolor* (uniflorum); foliis quaternis elongato-ligulatis, angustis, spiralibus, cinereo-virentibus, corollæ hexapetalodi-partitæ laciniis linearibus; stylo unico, stigmate subsimplici.
Amaryllis colchiciflora. *Denominatio sub quâ exemplar præsens à Moschâ missum fuit.*
Colchicum montanum minus versicolore flore. *Clus. hist.* 1. 201; *cum ic.*

In recapitulating the species of this genus in a preceding article (541) of this publication, we had attributed the synonym from Clusius belonging to the plant before us, to the MERENDERA *Bulbocodium* of the Liliacées, where it is represented from a dried sample; but we are convinced that the plant of the Liliacées is the COLCHICUM *montanum hispanicum* of Clusius, and consequently, in so far as a synonym can decide the point, the COLCHICUM *montanum* of Linnæus. A very distinct species from the present.

The drawing of *versicolor* was taken at Mr. Griffin's garden, South Lambeth, where the bulb had been obtained from Moscow, under the appellation of AMARYLLIS *colchiciflora,* and is quite new to our collections. It flowered in the autumn, when the leaves began to appear above the coating of the bulb, in the way shown in our drawing and in the figure in Clusius's work, though they did not attain their full growth before the following spring. The full-grown ones were not known to Clusius, to whom the drawing of the plant introduced in his valuable history seems to have been communicated by his correspondent Plateau of Tournay, its original cultivator.

The species is probably native of the South East provinces of the Russian dominions, and of the Levant; but has never been adopted in any general system, being probably unknown to any botanist, except through the figure we have cited.

In Colchicum the styles are generally far or entirely disunited, sometimes united nearly to the top, as in *Bulbocodium*, sometimes quite to the top where they end in a nearly simple point, as in the present species.

The separation of Bulbocodium and Merendera from Colchicum, is in our view not only inexpedient, but worse. The habit of the three is peculiar to themselves, and so far similar, as to differ in no greater degree than to illustrate the near transitions of species so palpably akin as in our apprehension to constitute a useful genus.

The corolla of *versicolor* separates finally for its whole length into six narrow petallike segments, at the top of the ungues of which the short filaments are inserted.

We subjoin an amended enumeration of the species, of which complete samples are seldom found in herbariums. The inflorescence and foliage being generally produced at far distant intervals, one or the other seems always to have escaped the collector.

COLCHICUM.

versicolor.	*Nob.* Colchicum montanum minus versicolore flore. *Clus. hist.* 1. 200. *cum ic.*
Bulbocodium.	*Nob. in Curtis's magaz. fol. vers.* 1028. Bulbocodium vernum. *Curtis's magaz.* 153. *Willd. sp. pl.* 2. 62.
montanum.	*Lin. sp. pl. ed.* 1. 1. 312: *Willd. sp. pl.* 2. 273. Merendera Bulbocodium. *Redouté Liliac.* 25. Colchicum montanum. *Clus. hist.* 1. 200.
arenarium.	*Suprà fol.* 541.
alpinum.	*Redouté liliac.* 8. 467.
variegatum.	*Curtis's magaz.* 1028. *Willd. sp. pl.* 2. 273.
autumnale.	*Engl. bot.* 133. *Willd. sp. pl.* 2. 272.
polyanthon.	*Nob. in Curtis's magaz. fol. vers.* 1028. Colchicum pannonicum. *Clus. hist.* 1. 199.
byzantinum.	*Nob. in Curtis's magaz.* 1122. *Clus. hist.* 1. 199, 200.

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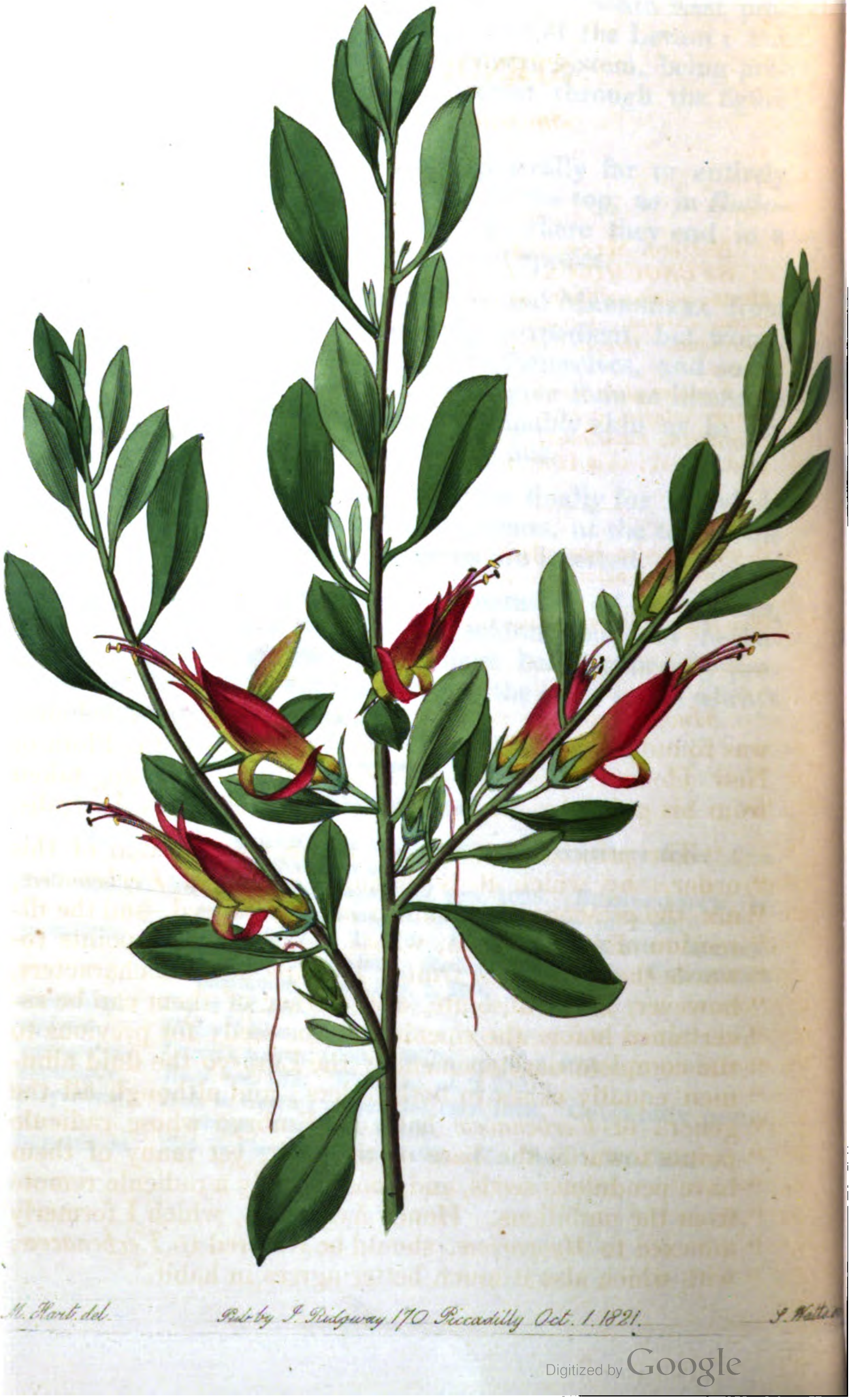

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STENOCHILUS glaber.

Smooth-leaved Stenochilus.

◆

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. MYOPORINÆ. *Brown prod.* 1. 514.

STENOCHILUS. Calyx 5-partitus. *Corolla* ringens; *labio superiore* erecto, semiquadrifido; *inferiore* indiviso, angusto, deflexo. *Stamina* didynama, exserta. *Germen* 4-loculare, loculis 1-spermis. *Stigma* obtusum, indivisum. *Drupa* baccata, 4-locularis. *Semina* solitaria. *Embryo* inversus.

Frutices *glabriusculi, v. tomento tenuissimo cinerascentes.* Folia *alterna, sæpiùs integra, avenia.* Pedunculi *solitarii, uniflori, ebracteati.* Flores *purpurei v. flavicantes.* Drupæ *putamen abortione sæpè biloculare.* Brown prod. 1. 517; et in Hort. Kew. ed. 2. 4. 61.

S. *glaber,* foliis lanceolatis ellipticisve integris apice nunc dentatis glabris flore vix longioribus, ramulis tomentosis, caule diffuso. *Brown prod.* 1. 517.

Stenochilus glaber. *Brown in hort. kew. ed.* 2. 4. 61. *Curtis's magaz.* 1942.

Myoporinæ, the order where the present plant belongs, was founded by Mr. Brown in the Prodromus of the Flora of New Holland; but the following observations are taken from his general remarks on the Botany of Terra Australis.

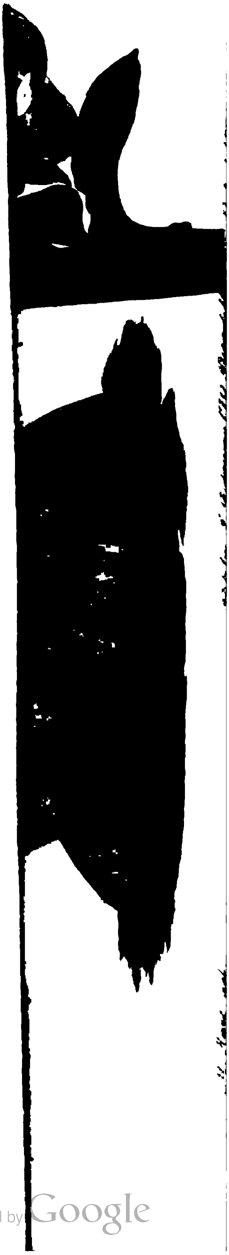
"The principal characters in the fructification of this "order, by which it is distinguished from *Verbenaceæ,* "are the presence of Albumen in the ripe seed, and the direction of the Embryo, whose radicule always points towards the apex of the fruit. The first of these characters, "however, is not absolute, and neither of them can be ascertained before the ripening of the seed: for previous to "the complete developement of the Embryo the fluid albumen equally exists in both orders; and although all the "genera of *Verbenaceæ* have an Embryo whose radicule "points towards the base of the fruit, yet many of them "have pendulous seeds, and consequently a radicule remote "from the umbilicus. Hence AVICENNIA, which I formerly "annexed to *Myoporinæ,* should be restored to *Verbenaceæ,* "with which also it much better agrees in habit."

" *Myoporinæ* with the exception of BONTIA, a genus of " equinoctial America; and of two species of MYOPORUM " found in the Sandwich Islands, has hitherto been observed " only in the Southern hemisphere, and yet neither in South " Africa, nor in South America beyond the tropic. Its " maximum is evidently in the principal parallel of Terra " Australis, in every part of which it exists; in the more " southern parts of New Holland, and even in Van Diemen's " Island it is more frequent than within the tropic. The " genus MYOPORUM is also found in New Zealand, Norfolk " Island, New Caledonia, and the Society Islands."

STENOCHILUS, like the whole order, consists of shrubs. Two species only are recorded; and both observed by Mr. Brown on the South East Coast of New Holland. Another is known to have been found on the Western coast of the same continent by M. Leschenault, the naturalist of the expedition under Captain Baudin; and we have heard that a fourth from the interior of the same country is now in our gardens.

Glaber was introduced in 1803 by Mr. Peter Good, and was drawn this summer in the greenhouse at the nursery of Messrs. Colvill in the King's Road, Chelsea; where it flowers for a long time in succession.

The following is a version of Mr. Brown's character of STENOCHILUS. *Calyx* 5-parted. *Corolla* ringent; *upper lip* upright, half4cleft; *lower* undivided, narrow, deflex. *Stamens* protruding. *Germen* 4-celled, cells single-seeded. *Stigma* obtuse, undivided. *Drupe (stone-fruit)* berried, 4-celled. *Seeds* solitary. *Shrub* nearly smooth, or else of a greyish hue proceeding from a very fine cottony fur. *Leaves* alternate, generally entire, unmarked by veins. *Peduncles* solitary, one-flowered, without bractes. *Flowers* either purple or deep yellow. The *stone* of the fruit miscarrying of two of its cells, is often only bilocular, instead of quadrilocular.



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LISSOCHILUS speciosus.

Mr. Griffin's Lissochilus.

GYNANDRIA *MONANDRIA*.

Nat. ord. ORCHIDEÆ. *Jussieu gen.* 64. *Brown prod.* 1. 309. *Div. IV.* *Anthera* terminalis mobilis decidua. *Massæ pollinis* demùm cereaceæ. *Brown in Hort. Kew. ed.* 2. 5. 205.

LISSOCHILUS. *Massæ pollinis* 2, obliquè bilobæ. *Labellum* basi saccatum: laminâ sessili indivisâ convexâ, posticè excisâ et cum basi columnæ apteræ edentulæ connatâ. *Perianthii foliola exteriora* calycina (reflexa:) *interiora* petaloidea (divaricata). *Brown MSS.*

L. *speciosus*, petalis interioribus divaricatis duplo majoribus exterioribus reflexis, labello altè cordato. *Brown MSS.*

Herba *4-pedalis et ultra.* Folia *radicalia ensiformia acutissima crassiuscula rigidula viridia nec glauca, marginibus carinâque lævibus: basibus dilatatis incrassatis in bulbum emersum connatis, scapo aliquotiès breviora.* Scapus *vaginatus teres viridis solidus, fasciculis vasorum sparsis.* Vaginæ *distantes strictæ foliaceæ, in foliola appressa lanceolata acuta longitudine vix ipsius vaginæ productæ.* Spica *racemosa simplicissima erecta laxa sesquipedalis.* Bracteæ *foliaceæ lanceolatæ, patulæ sæpiùsve divaricatæ, immersè nervosæ, marginibus lævibus, infimæ in scapum paulò decurrentes ovarium cum pedicello suo superantes, reliquæ sessiles, superiores ovario breviores.* Flores *speciosi è torsione pedicelli baseosque ovarii verè resupinati labello antico.* Perianthii foliola 3 exteriora *utrinque viridia calycina, distincta arctè reflexa ovata acutiuscula immersè nervosa, postico plano, lateralia paulò latiora levissimè concava:* interiorum lateralia *petaloidea, flava, immaculata, divaricatissima, oblongo-ovata, obtusiuscula limbo parùm reflexo, disco hinc convexiusculo; nervosa nervis lateralibus alternatìm simplicibus bifidisque, ipsa basi alba.* Labellum *lateralibus interiorum vix brevius, basi subtùs calcarato-saccatum cornu brevissimo compresso albo:* lamina *sessilis, circumscriptione ovato-oblonga, flava basi albicante venis purpureis, apice subretuso, basi altè cordata lobis posticis rotundatis dimidio inferiore liberis superiore cum basi columnæ cohærentibus suturis manifestis, lateribus subparallelo-reflexis plicatis plicis paulò tantùm elevatis obtusis sulcis intersticiliabus angustis: disco convexo axi gibbosiusculo.* Columna *proportionata semiteres è basi alba pallidè virens, aptera apice edentulo posticè rotundato.* Anthera *terminalis mobilis decidua, in expanso flore apicem anticè declivem columnæ operiens, didyma dorso incrassato dilutè viridi apice retuso, bilocularis loculis approximatis septulo partiali incompleto contrario in latere exteriore instructis.* Massæ pollinis *in singulo loculo singulæ, in gemmâ florali juniori minutissimè granulosæ, in expanso flore cereaceæ, ovatæ, post migrationem in apice obliquo columnæ (clinandro) inversæ, posticè (respectû antheræ anticè) instructæ lobulo minore operiente majoris cavitatem illitam materiâ viscidâ elastica flavescenti processû cujus massæ insertæ lingulæ communi brevi lato-lineari membranaceæ albæ è glandulâ subrotundâ apicis stigmatis ortæ.* Stigma *anticum cavum subrotundum viridè secernens.* Brown MSS.

The plant here described is the only certain species of Lissochilus; *Cymbidium giganteum*, however, according to Thunberg's description, may also belong to the same genus.

This genus in affinity comes nearest to those plants of South Africa at present referred to Limodorum and Cymbidium, namely, *Limodorum barbatum*, *triste*, *longicorne*, and perhaps also *hians* of Thunberg (not however Satyrium hians *Linn.* which seems to be a Disa), *Cymbidium pedicellatum* and *aculeatum*. These along with several Indian species also referred by Swartz and Willdenow to Limodorum, especially *L. virens*, *carinatum*, and perhaps *epidendroides*, form a genus (EULOPHUS), related on the one hand to Dipodium (vide *prodr. flor. nov. holl. p.* 330), and essentially agreeing with Lissochilus in the structure of anthera, but sufficiently different from it in its trilobed crested labellum, which is neither cordate nor connected at base with the column. In both these characters Lissochilus equally differs from *Angræcum* of M. du Petit Thouars, which has also an elongated spur and a considerably different habit.

Among the plants at present referred to, Limodorum, another very distinct genus may be noticed, consisting of *Limodorum veratrifolium*, and judging from Kæmpfer's figure, *L. striatum* also. This genus (CALANTHE) agrees with Bletia in having eight pollen masses, but differs from it in the claw of the labellum being connected with the column. It is not unlikely that this may be the *Cyanorkis* of M. du Petit Thouars, who will probably hereafter publish it under a different name. *Brown MSS.*

Our plant is one of the handsomest of its natural family, and until introduced from the Cape of Good Hope by Mr. Griffin, unnoticed by any writer, and a stranger to both our gardens and herbariums. It flowered this summer in the hothouse at South Lambeth, throwing up a stem more than four feet high, which reminded us of that of the Tuberose, and producing a spike of fragrant blossom, that by successive expansion became nearly two feet long, and lasted almost two months in beauty.

We feel pride that this work has been the means of communicating the above learned and elaborate document.

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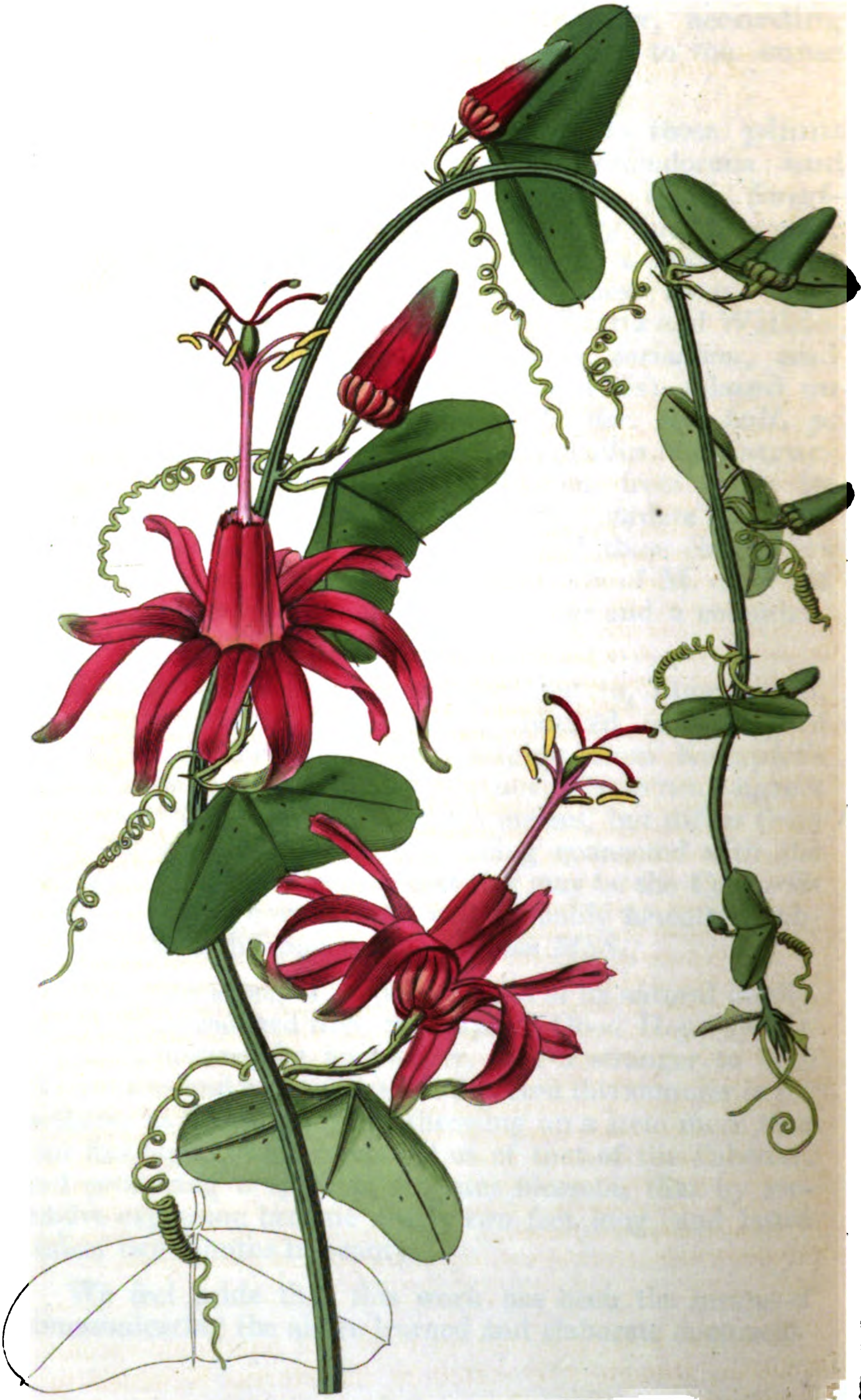

M. Hart. del. Pub by J. Ridgway 170 Piccadilly Oct. 1. 1821. J. [illegible]

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PASSIFLORA Murucuja.

Tubular-crowned Passionflower. Murucuja.

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MONADELPHIA *PENTANDRIA.*

Nat. ord. PASSIFLOREÆ. *Jussieu in ann. du musée.* 6. 102.

PASSIFLORA. Suprà vol. 1. *fol.* 13. *ubi conjungi potest character sequens* MURUCUJÆ à *Jussieuio separatus.* "*Corolla* PASSIFLORÆ colorata, urceolo prætereà subtùs sulcato. *Corona interior* non multipartita et triplex, sed simplex indivisa erecta tubuloso-conica truncata circa germinis stipitem connivens. Cætera omninò ut in PASSIFLORÂ." *Jussieu gen.* 398.

P. *Murucuja,* foliis bilobis obtusis, petiolis eglandulosis corona campanulata truncata integerrima. *Willd. sp. pl.* 3. 612.
Passiflora Murucuja. *Lin. sp. pl. ed.* 2. 2. 1357. *Amœn. acad.* 1. 223. *tab.* 10. *fig.* 10. *Cavan. diss.* 10. 456. *t.* 282. *Swartz obs.* 336. *Hort. Kew. ed.* 2. 4. 150.
Murucuja ocellata. *Persoon syn.* 2. 222.
Murucuja. *Jussieu gen.* 398.
Passiflora foliis tenuioribus trinerviis bicornibus lunatis, sinu anteriori obtuso, *Browne jam.* 328. 12.
Murucuja folio lunato. *Tournef. inst.* 241. *tab.* 125 *(optimè).*
Clematis indica, flore puniceo: folio lunato. *Plum. amer.* 72. *t.* 87.

Fruticosa, ramis sulcato-angulosis glabris. Fol. *transversè oblongata, divaricato-biloba, obsoletè lunata, venosa, sesquiunciam latitudine semunciam profunditate parùm excedentia, apice emarginata setâque minutâ præfixa, basi curvo leni rotundata, 3-nervia, scrobiculis paucis glandulosis vagis madentibus subtùs punctata, lobis apice rotundatis:* pet. *eglandulosus brevior pedunculis;* stipulæ *parvæ, subulatæ.* Flores *punicei, sub-unicolores, recurvo-stellati, unciâ profundiores cum columnâ 3-unciali, solitarii, axillares:* ped. *sublongior robustiorque petiolis semunciam vix excedens, medio v. circà articulatus,* bracteolis 2-3 *minutis subulatis vagis appressis infra articulum.* Cal. *firmior;* urceolus *brevi-cupulatus, extùs deciès toroso-sulcatus,* limbus *recurvo-divaricatus segmentis ligulato-attenuatis concavis acutulis, apice virentibus.* Petala *istis ¼ parte ferè breviora, paulò angustiora, teneriora, unicolora, lineari-oblonga, obtusa, explanato-patentia, summo urceolo inserta.* Corona *simplex, concolor, tubuloso-conica, duplo ferè calyce brevior erecta, plicis* 5 *obsoletiùs impressa, ore explicato eroso abrupto.* Operculum *pallidè rubens, membranosum, totum secundùm parietem urceoli deflexum; margine dentato-fissili recurvo.* Nect. *albicans, urceolo calycino conforme, per septa* 10 *carnosa parallela longitudinalitèr in cellulas totidem divisum.* Columna *exserta, glabra;* stipes *longitudine calycis, gracilis, strictus, rubescens, germine pluriès longior:* fil. *stipitis concolora, glabra, divaricato-recurva, subulata;* anth. *à medio dorso appensæ, cernuæ, versatiles, lineari-oblongæ, viridiusculæ,* polline *luteo.* Germ. *viridissimum, glabrum, ovali-oblongum obsoletè subtrigonum:* styli *germine longiores, punicei, compresso-filiformes, graciliores;* stigmata *sub-capitato-ovata, atro-rubentia, obliquè truncata cum disco depresso.*

It is the first time that we meet this handsome species in flower, though it is stated in the Hortus Kewensis to

have been cultivated by Miller in 1739; but if any one will turn to the plant described by that celebrated gardener in his Dictionary, he will convince himself, that it was *perfoliata*, already published in this work (vol. 1. fol. 78), and not *Murucuja* that is there intended. The two have several peculiar features in common, though in the main they are widely distinct; both have a coloured calyx, a cupped urceolus, a protruded column, a deflected operculum, an upright conically contracted crown, and two-lobed lunulate leaves; but in *Murucuja* the crown is of one piece, the nectarium divided into 10 shallow cells by as many longitudinal fleshy septa, and the leaves are entire at the base; while in *perfoliata*, on the other hand, the crown is composed of many converging radii, the nectary is an undivided chamber, surrounded at the circumference by a single circular fleshy septum, and the leaves are cordately indented at the base.

Our figure was taken in August last in the hothouse of the nursery of Messrs. Colvill, in the King's Road, Chelsea; where the plant had been raised from seed received by Mr. Anderson, the superintendent of the Chelsea Physic Garden, from St. Domingo, where it was formerly found wild by Professor Swartz. We suspect that the present is the first instance of the species having flowered in this country.

The samples in the Banksian Herbarium were collected by Swartz, and have solitary flowers, not twin ones, as described in the "*Observationes*" of that celebrated botanist.

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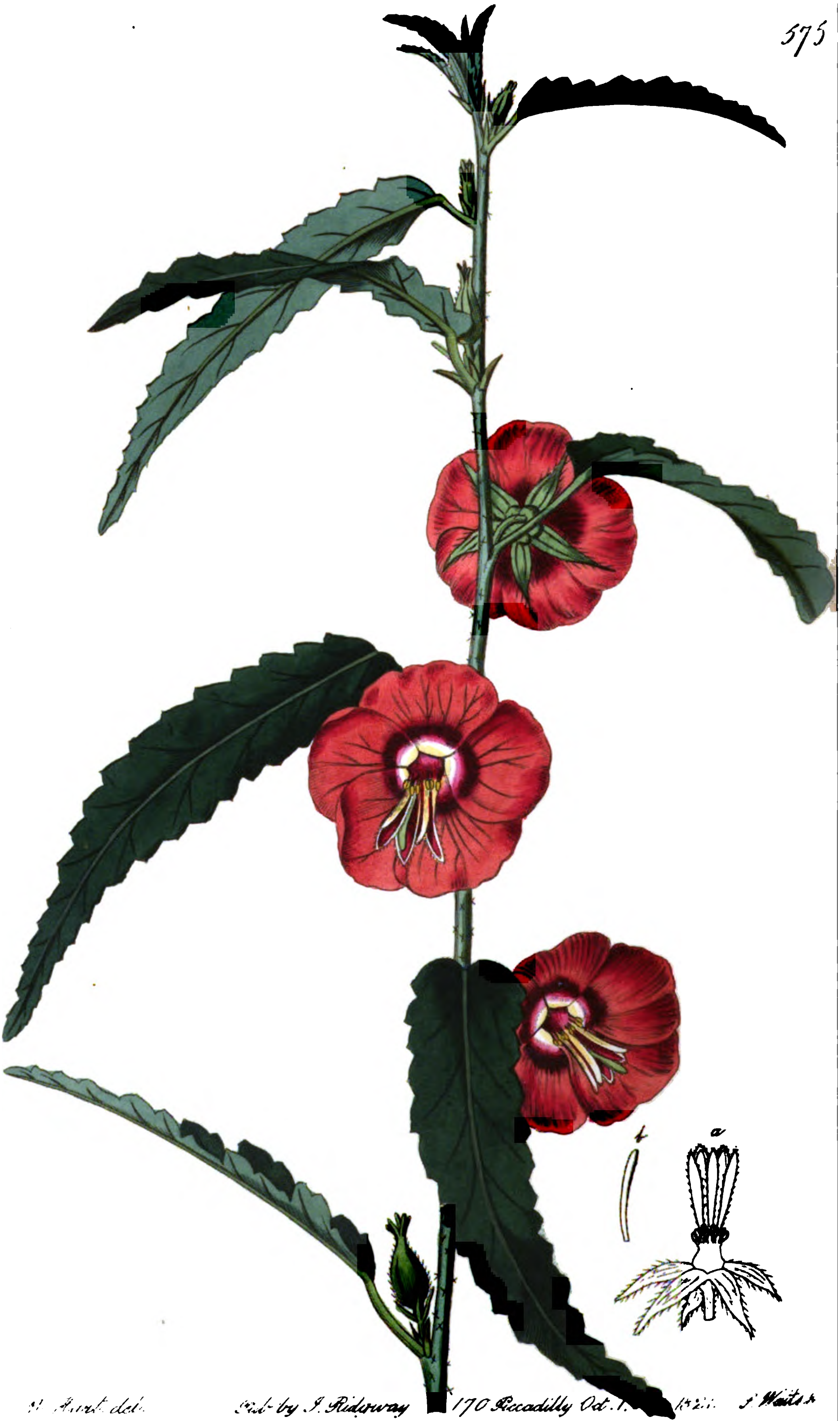

S. Hart del.   Pub. by J. Ridgway 170 Piccadilly Oct. 1. 1821.   J. Watts sc.

PENTAPETES phœnicea.

Scarlet-flowered Pentapetes.

MONADELPHIA *DODECANDRIA.*

Nat. ord. Malvaceæ. *Jussieu gen.* 271. *Div. V.* Stamina basi in urceolum sessilem connata, sterilia fertilibus intermixta, definita aut rariùs indefinita.

PENTAPETES. *Cal.* duplex: *exterior* 3-phyllus, unilateralis, caducus: foliolis linearibus, acuminatis: *interior* monophyllus, 5-partitus, persistens; laciniis lanceolatis, acuminatis, patentibus, corollâ longioribus. Pet. 5, subrotunda, patentia, urceolo staminum affixa. *Fil.* 15, filiformia, erecta, corollâ breviora, infernè in urceolum 5-gonum coalita, supernè libera: *anth.* sagittatæ, erectæ: *ligulæ* 5, lineari-lanceolatæ, petaliformes, erectæ, inter terna stamina singulæ, ex urceolo prodeuntes. *Germ.* ovatum: *stylus* filiformis, supernè incrassatus, striatus, staminibus longior, persistens: *stigma* obsoletè 5-dentatum. *Caps.* membranacea, subglobosa, acuminata, 5-loc., 5-valv.: *dissepimentis* contrariis: *sem.* octona, ovata, acuta, utrinque 4 dissepimento interius affixa. *Lin. gen. pl.* 2. 459.

P. phœnicea. *Lin. sp. pl. ed.* 2. 2. 958. *J. Miller illustr. J. G. Miller sp. pl. Lamarck illustr. t.* 576. *f.* 1. *Gærtn. sem.* 2. 248. *t.* 134. *fig.* 4. *Trew pl. rar.* 7. *t.* 5. *Willd. sp. pl.* 3. 727. *Hort. Kew. ed.* 2. 4. 193.
Pentapetes. *Miller ic.* 133. *tab.* 200.
Dombeya phœnicea. *Cavan. diss.* 3. 129. *t.* 43. *fig.* 1.
Alcæa fruticosa pentaphylloides æmula floribus amœnissimis rubellis, calyce producto. *Pluk. alm. t.* 126, *fig.* 4.
Alceæ indicæ cognata planta. *Pluk. alm.* 18. *t.* 255. *fig.* 3.
Blattaria zeylanica, flore amplo coccineo. *Comm. hort.* 1. 11. *t.* 6.
Flos impius. *Rumph. amb.* 5. 288. *t.* 100. *fig.* 1.
Naga-Pu. *Rheede mal.* 10. 111. *t.* 56.

The subjoined account of our plant is by Sir James E. Smith.

" Pentapetes (πενταπετες, *having five leaves)*, an ancient name for Cinquefoil, adopted for a very different plant by Linnæus. Though he declines any explanation of it, the five leafy expansions, which, in his Pentapetes, accompany the stamens, seem so well to account for this appellation, that one cannot but think the idea of such an adaptation of the word had occurred to him, though he might have forgotten it when he wrote the Philosophia Botanica, p. 175. There seems otherwise no possibility of accounting for his choice of the name, for the particular genus in question;

of which indeed what is now separated under the denomination PTEROSPERMUM, was the original type, but the above character is common to that and the present genus."

" Native of various parts of India, sometimes cultivated for its beauty in our stoves, where it has been known considerably above a century. It flowers in July, and is annual. The *stem* is two or three feet high, round, branched, leafy, besprinkled with a few close-pressed starry bristles, indicative of its natural order. *Leaves* alternate, stalked, lanceolate, taper-pointed, strongly crenate, smoothish, more or less hastate at the base. *Stipulas* in pairs, linear. *Flowers* axillary, solitary, drooping, on rough stalks shorter than the *footstalks;* they are of a beautiful scarlet colour, and above an inch in diameter; the five leafy appendages (between every parcel of three stamens) are externally rough or hoary. The foolish name by which Rumphius has distinguished this flower *(Flos impius)* and which is said to be a translation of its Indian appellation, alludes to its profane or impious nature, in never looking towards heaven." *Smith in Rees's Cyclopœdia.*

The genus consists at present of one species. The PENTAPETES (DOMBEYA. *Willd. sp. pl.* 3. 725. *and Curtis's magaz.* 1000) *Erythroxylon* of the first edition of the Hortus Kewensis has been referred to MELHANIA by Mr. Brown, in the second edition of that work; a genus differing chiefly from the present in technical character, by having five instead of fifteen stamens; but in nature and habit very widely.

The drawing was taken this summer at Mr. Lee's nursery, Hammersmith. The plant is rare with us, notwithstanding its beauty and long-standing.

The " *Sjamin*" of Van Rheede's Hortus Malabaricus, quoted by Willdenow to this species, belongs to HIBISCUS *Rosa malabarica* of this work (vol. 4. fol. 337). It is the " *Naga-Pu*" of Rheede, which is the species before us.

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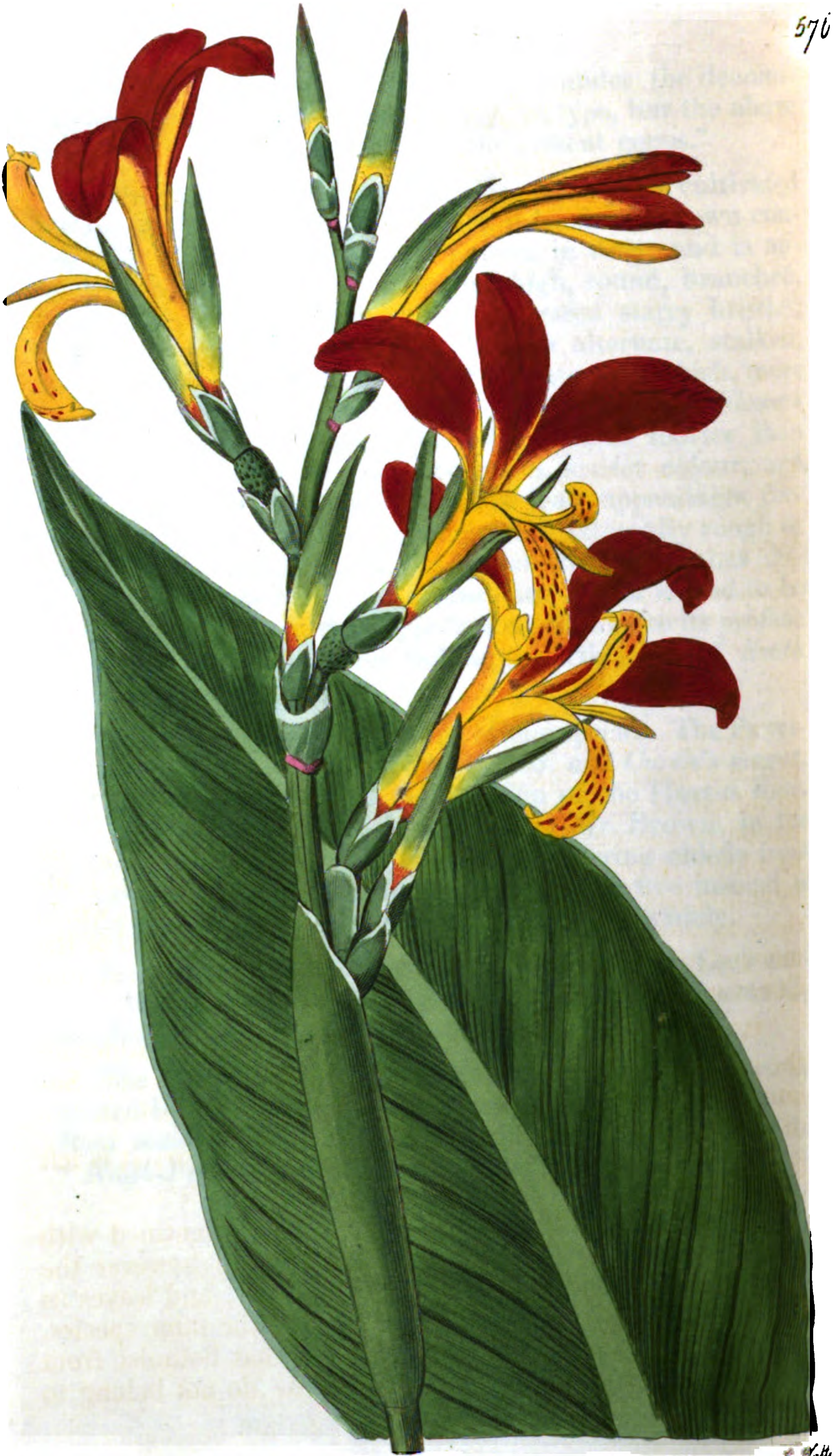

M. Hart. del. Pub. by J. Ridgway 170 Piccadilly Oct. 1. 1821. J. Watts sc.

CANNA patens.

Spreading-flowered Indian-shot.

MONANDRIA *MONOGYNIA.*

Nat. ord. CANNÆ. *Jussieu gen.* 62.
CANNEÆ. *Brown prod.* 1. 307, *in obs. III.; ubi* SCITAMINEIS *distinguitur.*
CANNA. *Suprà vol.* 3. *fol.* 206.

C. *patens*, limbi interioris corollæ labio superiore trifido; laciniis æqualibus, ovatis, patentibus; unguibus longis; labio inferiore bifido, revoluto: foliis ovatis, lanceolatis. *Roscoe MSS; (ex angl. vers.)*
Canna patens. *Roscoe in trans. linn. soc.* 8. 338; *et in Hort. Kew. ed.* 2. 1. 1.
Canna indica. *Curtis's magaz.* 454; *(exclusis synonymis).*
Canna indica; ꝛ. *patens;* petalis interioribus reflexis coccineis, nectarii lacinia revoluta lutea lineolis rubris irrorata. *Hort. Kew.* 1. 1. *Willd. sp. pl.* 1. 3.

We have been favoured with the above specific character of the subject of this article by Mr. Roscoe, who continues to afford a portion of his literary leisure to the elucidation of the natural family where our plant belongs, and to which he has already so materially contributed. It is his intention before long to communicate to the botanic world the very considerable additions he has made to several of the monandrous genera, particularly CANNA, HEDYCHIUM, and CURCUMA.

We agree decidedly with that gentleman in considering the present plant as of the species intended by Messrs. Solander and Dryander in the Hortus Kewensis by *patens.*

The native place does not appear to be known; it is left in blank in Hortus Kewensis.

By Willdenow, CANNA *patens* has been identified with CANNA *chinensis* of his "Enumeratio;" where however the description is far from precise or satisfactory, and leaves us in doubt as to the reality of their being of the same species. At all events the synonyms adduced by that botanist from the works of Rumphius and Van Rheede do not belong to our plant.

We learn from Mr. Roscoe that nineteen species of Cannæ, exclusive of *iridifolia*, are cultivated in the stoves of the Botanic Garden at Liverpool.

The drawing was taken from a sample which flowered about three or four years ago in the hothouse of Messrs. Whitley and Co. in the King's Road, Fulham.

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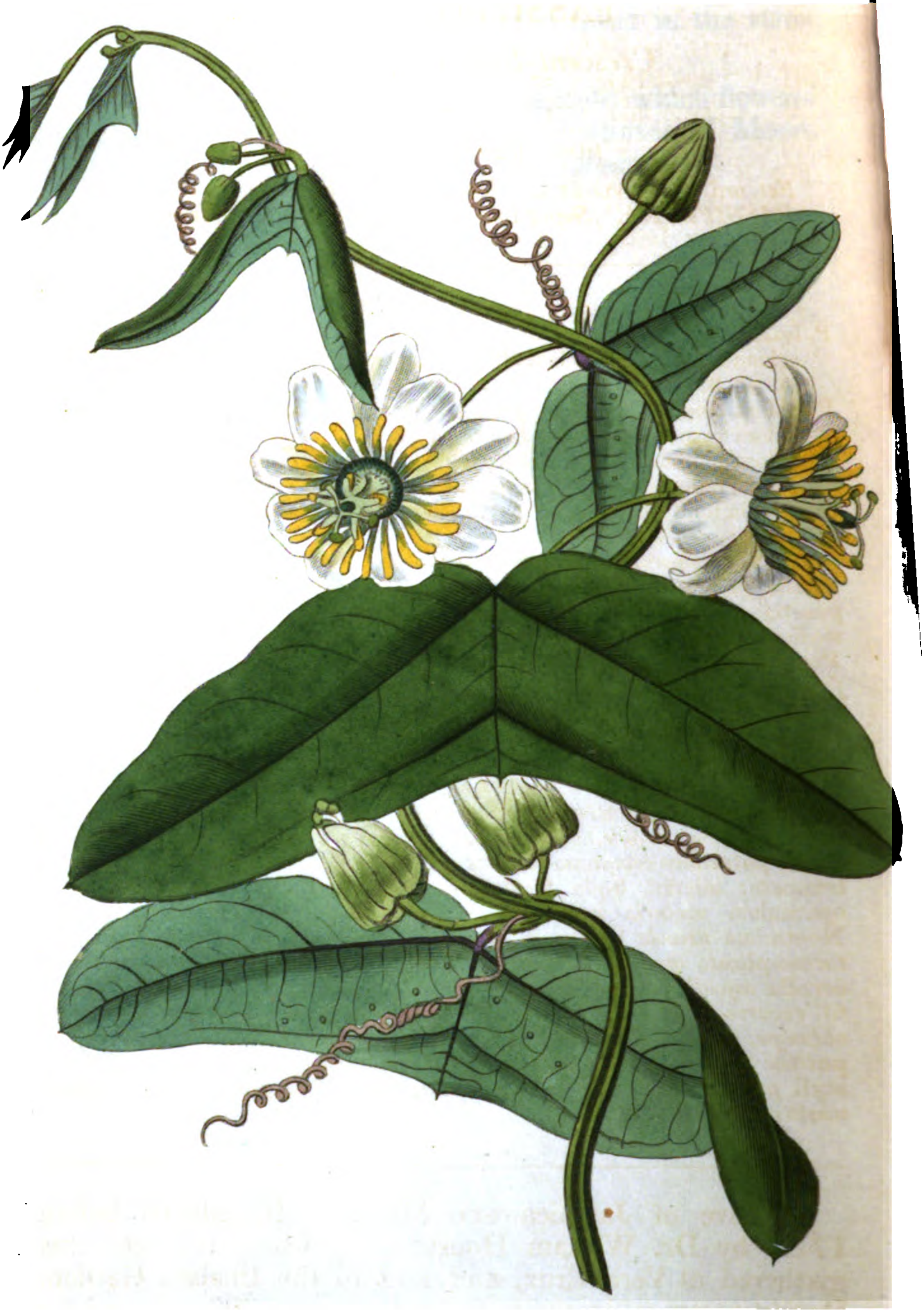

S. Hart del. Pub by J. Ridgway 170 Piccadilly Jun 1. 1821. S. Watt

PASSIFLORA lunata.

Crescent-leaved Passionflower.

MONADELPHIA *PENTANDRIA.*

Nat. ord. PASSIFLOREÆ. *Jussieu in ann. du musée.* 6. 102.
PASSIFLORA. *Suprà vol.* 1. *fol.* 13. *et fol.* 574 *hujus vol.*

Div. Foliis bilobis.

P. *lunata*, foliis cordatis divaricato-bilobis obtusis glabris punctatis, petiolis eglandulosis, pedunculis axillaribus geminis, filis coronæ clavatis. *Willd. sp. pl.* 3. 612.
Passiflora lunata. *Smith ic. pict.* 1. *Hort. Kew. ed.* 2. 4. 149.
Passiflora vespertilio. *Miss Lawr. passionfl. (non aliorum).*
Passiflora biflora. *Lamarck encyc.* 3. 36. *Cavan. diss.* 10. 457. *t.* 283.
Passiflora foliis bilobis glabris rigidis basi indivisis. *Mill. dict. ed.* 7. *n.* 13.
Granadilla folio lunato, flore parvo albo, fructû succulento ovato Houstoni. *Martyn dec.* 5. 52. *t.* 52.

Frutex *sempervirens, excelsiùs scandens.* Ramis *subherbaceis anguloso-striatis, subglabris.* Folia 3-*nervia, glabriuscula, magnitudine varia, floralia punctis subuniseriatis glandulosis madentibus notata,* setâ *parvâ nervum medium terminante:* pet. *brcvis:* stipulæ *parvæ, subulatæ, integræ, glabræ.* Pedunculi *gemini, recurvi, axillares, longiores petiolo* (⅔ *unciæ longi*), *filiformes, rigidiusculi, lanuginosi,* bracteolis 3 *appressis vagis v. nunc sub articulo approximatis, subulatis.* Flores *cernui, chloroleuci, inodori, diametro sesquiunciæ v. circà.* Cal. *crassiusculus, pallidè virescens, opacus, rotatus,* urceolo *brevissimo plano basi extùs toruloso,* segmentis *subcuneato-oblongis acumine brevi obtuso.* Cor. pet. *tenera, candicantia, pellucentia, elliptica, calyce breviora, vix angustiora, apice subdentata; ungue brevissimo.* Corona *duplex, lutea;* exterior ⅓ *brevior corollâ, radiis numerosis densis patentibus compresso-clavatis apice cuneato obtuso introrsum attenuato-truncato:* interior 3-*plo brevior, luteo-virens, radiis capillaceis erectis:* operculum *nectario incumbens, membranaceum, plicis densis profundis.* Nectarium *urceolo conforme,* septo *vallatum carnoso erecto-incurvescente toroso-plicato margine in aciem attenuato eroso; dorso lutescens.* Columna *corollæ æqualis;* stipes *albicans, glaber, robustus, duplo germine longior:* fil. *recurvo-patentia, albicantia, linearia, planiuscula, obtusa, nitida;* anth. *oblongæ, paulo supra basin dorsi appensæ, chloroleucæ,* polline *flavo.* Germ. *pallidè lutescens, pube minutâ opacatum, ovali-oblongum, obsoletè angulosum;* styli *pallidè virentes; compresso-clavati,* stigmatibus *pileato-capitatis pruinosis viridioribus.*

Native of Jamaica and Mexico. Introduced before 1733 by Dr. William Houston, by whom the seed was gathered at Vera Cruz, and sent to the Chelsea Garden. Pretty common in the hothouses of our collections, where it flowers freely nearly the year round. *Lunata* had been

very generally confounded with *punctata*, until the point was accurately settled by Sir James E. Smith, by whom the species has been established, and described in the above-cited work, where we find the following observation: "The "description of PASSIFLORA *punctata* (not the specific cha-"racter) in Linnæus's Systema Vegetabilium belongs to this "plant, as well as the observation in his Mantissa, p. 492; "but the latter is so obscure and erroneous, that it neither "agrees with the plant, nor with the original manuscript "from which it was printed."

"PASSIFLORA *punctata* is known by the figure and de-"scription of Feuillé, after whom Linnæus described it, "nor did he or myself ever see a specimen of that species. "The Abbé Cavanilles has given a figure of it from a plant "which flowered in the Royal Garden at Paris."

A high climbing evergreen shrub; with divaricately obtusely two-lobed 3-nerved veiny pea-green leaves, with small yellowish glandular oozing dots on the under side, which are more conspicuous, numerous, and regularly arranged in the leaves next the flowers. *Petioles* slightly downy, glandless. *Involucre* 3 small bractes. *Flowers* twin, greenish white, with a yellow crown of two ranks.

Drawn at the nursery of Messrs. Colvill, in the King's Road, Chelsea.

The species appears to come the nearest to PASSIFLORA *holosericea* (published in the 59th article of this work) of any other we are acquainted with.

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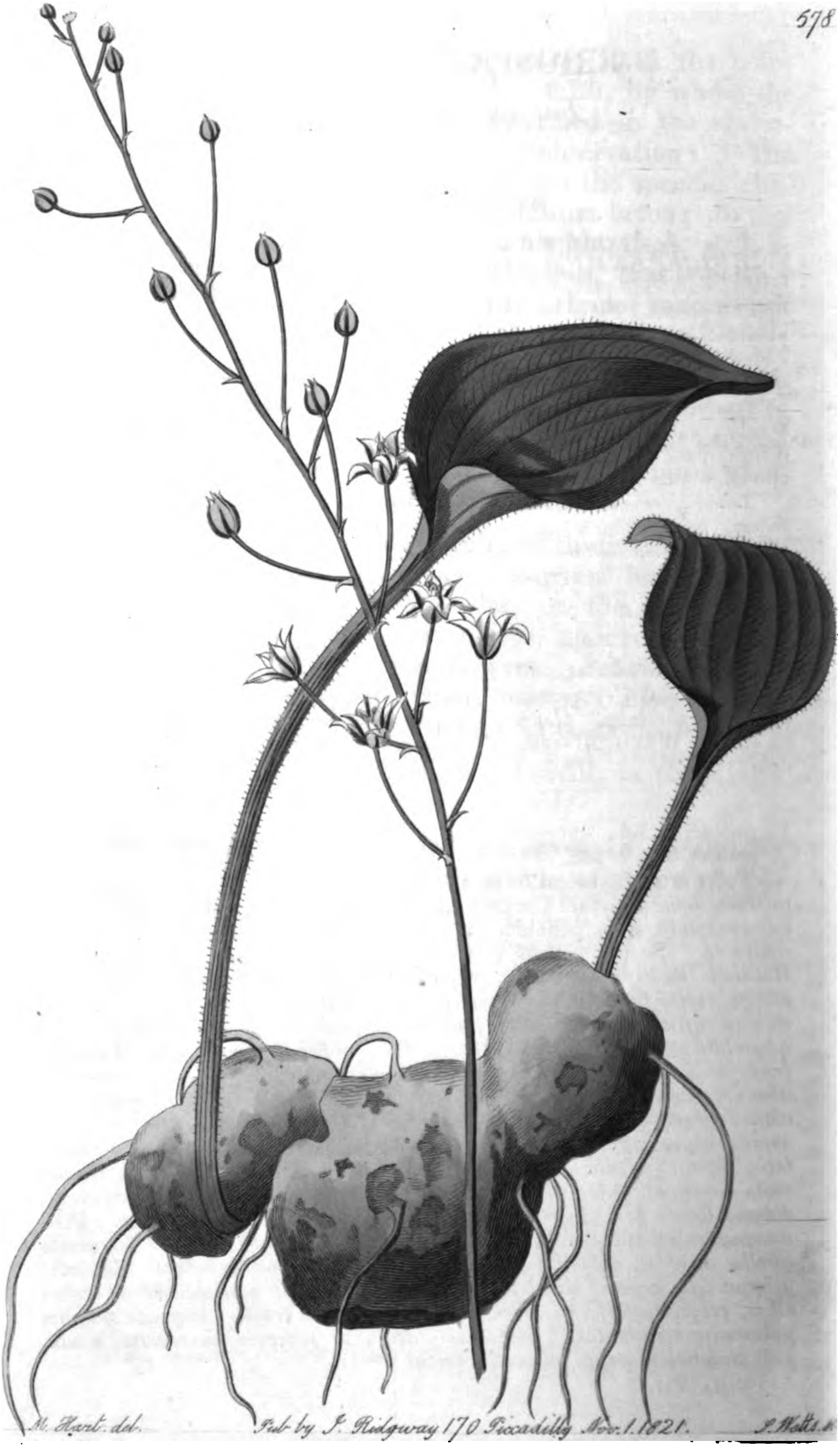

M. Hart. del. Pub. by J. Ridgway 170 Piccadilly Nov. 1. 1821. J. Watts. sc

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ERIOSPERMUM pubescens.

Fur-leaved Eriospermum.

HEXANDRIA *MONOGYNIA.*

Nat. ord. ASPHODELEÆ. *Brown prod.* 1. 274.

ERIOSPERMUM. *Cor.* infera, erecta, sexdivisa, regularis, subæqualis, emarcido-persistens, laciniarum series duplex, imbricans, interdùm biformi-patens. *Fila.* corollæ disco inserta, subæqualia, inclusa, conniventia, planiuscula, à basi latâ acuminata: *anth.* sagittato-didymæ, infrà divaricatæ, à medio dorso affixæ, erectæ, introrsæ. *Stylus* triquetro-filiformis, strictus, *stigmate* simplici v. subtrilobo, puberulo. *Germ.* loculis infernè biseriato-polyspermis, supernè vacuis. *Caps.* oblongo- v. subrotundo-trigona, 3-loc., 3-valv., valvis septigeris stellatìm replicandis: *sem.* (ex Jacquino) ascendentia, pauca, septi margini internæ utrinque funiculatìm annexa (modò in imo angulo cujusque loculi unum) pappo simplicitèr piloso vestita.

Tuber *perenne, amorpho-rotundatum, vagè gemmiparum, coalito-soboliferum, subtùs radicatum, intùs purpurascens v. decolor.* Folium *coriaceum, in gemmâ singulâ solum, radicale, involuto-petiolatum,* laminâ *sæpiùs simplice, nunc à disco supino echinatìm frondiculosâ* (folioliferum), *vel nunc è sinû petiolari frondem promittente subdivisam plumiformem erectam* (paradoxicum). Scapus *nudiflorus, simplex, strictus, elasticus, è quâque gemmâ unus, præveniens folium.* Racemus *distans vel proximus, floribus subsessilibus v. longè pedunculatis, albicantibus v. lutescentibus, viridi v. rubro fasciatis, oblongè vel oblatè campanulatis, lineas 3-9 profundis:* bracteæ *parvæ, acutæ, solitaria, partiales. Genus foliatione tenùs anomalum; ex flore* ALBUCÆ, *ex radice* WACHENDORFIÆ, *ex semine* TILLANDSIÆ *quodammodò accedens?*

E. *pubescens,* folio subcordato, acuto, cucullato, pubescente. *Jacq. hort. schœnb.* 3. 8. *t.* 265.

Tuber extùs fuscescens intùs rubescens. (Jacq.) Folium *erectum, hirsutiùs pilosum, laminâ coriaceâ, ovato-acuminatâ, parallelo-nervosâ, infernè cucullato-convoluta et in* petiolum *longiorem subcylindricum striatum pallidum contractâ.* Scapus *pedalis v. ultrà, filiformis, strictus, viridis, glaber.* Racemus *multiflorus, patens, floribus longipedunculatis, vagè distantibus, albidis, viridi-fasciatis, vix ¼ unciæ profundioribus:* ped. *graciles, filiformes, elastico-rigentes, corollâ quater plurièsve longiores, assurgentes,* bracteâ *parvâ sphacelatâ subulatâ appressâ ad basin.* Cor. *profundè partita, biformi-patens, fundo nectarifero, laciniis* 3 extimis *urceolato-rotatis infrà laxiùs conniventibus suprà recurvo-divaricatis oblongis acuminatis acumine conduplicato,* 3 intimis *erecto-conniventibus obovato-cuneatis, suprà orbiculatis eroso-crenulatis atque plicâ brevi posticâ carinatis, infrà subunguiculato-angustatis.* Stam. ⅓ *breviora corollâ;* fil. *laciniarum pedi inserta, æqualia, erecta, ovato-acuminata planiuscula, alba, apice inflexa;* anth. *breves, sagittato-didymæ loculis basi divaricatis, à medio dorso appensæ,* polline *flavo.* Pist. *stamina subexsuperans:* germ. *viride, glabrum, conicum, disco incrassato corollæ insidens, obtusè 3-gonum angulis striatis;* loculis *infernè biseriato-polyspermis, supernè vacuis,* ovulis *obversè oblongis adscendentibus:* stylus *albus, triquetro-filiformis, erectus, germine parùm brevior,* stigmate *simplici pubescente terminatus.* Sem. *(ex Jacquino) solitaria, lanceolata, acuta, pilis simplicibus pappi ad instar obsessa.*

A genus instituted by Jacquin; who does not seem however to have been aware that his ORNITHOGALUM *paradoxicum* belonged to it. The group belongs wholly to the Cape of Good Hope, and is of great singularity; the foliage, especially in *paradoxicum* and *folioliferum*, appears, to the extent of our botanical knowledge, an anomaly; the flower in some respects agrees with that of ALBUCA; the seed, from the description of Jacquin, with that of TILLANDSIA; and the coloured irregular tuber with that of WACHENDORFIA. We have placed it in ASPHODELEÆ as others have done, but scarcely think that order can be the final destination of the genus.

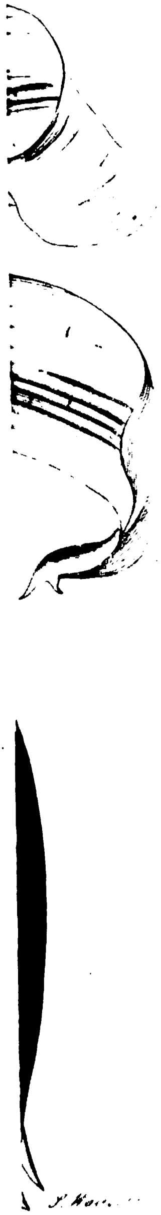
The species before us has been now first introduced by Messrs. Colvill, of the King's Road, Chelsea; where it flowered last summer in the greenhouse.

Tuber perennial, large, irregularly rounded gemmiparous (bearing eyes or buds), brown without, red within. *Leaf* upright, roughishly furred, with an ovate acuminate coriaceous parallelly nerved *lamina*, involutely contracted below where it narrows into a long pale cylindrical upright fluted *petiole*. *Scape* a foot high or more, filiform, stiff, green, smooth. *Raceme* many-flowered, spreading; *flowers* long-stalked, irregularly wideset, whitish with green fillets, not much more than ¼ of an inch deep: *peduncles* slender, elastic, and firm, four times longer than the flower or more, assurgent (inclining upwards with a curve), having a small sphacelate subulate closepressed *bracte* at the base. *Cor.* deeply cleft, expanding in two forms, filled at the bottom with a honied lymph; 3 *outer segments* urceolately rotate, converging loosely at the lower portion, spreading open recurvedly at the upper, oblong taper-pointed folded at the point, 3 *inner ones* converging erectly, obovately cuneate, orbicular at the top and erodedly crenulate with a short keel-like plait at the back, shortly unguiculate at the bottom. *Stamens* ⅓ shorter than the corolla; *filaments* inserted at the base of the segments, equal, upright, ovately taper-pointed, flattish, white, crooked inwards at the point; *anthers* short, twin, divaricately parted at the base, suspended from the middle of the back, upright: *pollen* yellow. *Pistil* rather longer than the stamens: *germen* green, smooth, conical, placed upon the thick disk of the corolla, obtusely 3-cornered with fluted angles; *cells* many-seeded at the lower part, empty above; *ovules* in two ranks, obversely oblong, ascending; *style* white, filiform, 3-cornered, straight, but little shorter than the germen, with simple pubescent *stigma*. *Seeds* (according to Jacquin) solitary, lanceolate, pointed, covered with simple seedcrownlike hairs.

◆

Specierum enumeratio.

paradoxicum.	*Nobis in Curtis's magaz.* 1382. *vers. fol.* Ornithogalum paradoxicum. *Jacq. collect.* 5. 81. *t.* 1. *Willd. sp. pl.* 2. 115.
folioliferum.	*Andrews's reposit.* 521.
pubescens.	*Jacq. hort. schœnb.* 3. 7. *t.* 264. *Suprà in loco præsenti.*
lanuginosum.	*Jacq. l. c. t.* 265.
latifolium; (α).	*Nobis in Curtis's magaz.* 1382; *(forsàn à β quoad speciem diversum?)*
latifolium; (β).	*Nob. in loc. cit. vers. fol. Jacq. coll.* 5. 73. *ic. rar. t.* 420. *Willd. sp. pl.* 2. 110. *Hort. Kew. ed.* 2. 2. 256. ORNITHOGALUM capense. *Lin. sp. pl. ed.* 2. 1. 441.
lanceæfolium.	*Jacq. coll.* 5. 72. *ic. rar.* 2. *t.* 421. *Willd. sp. pl.* 2. 111. *Hort. Kew. ed.* 2. 2. 256. *Redouté liliac.* 394.
parvifolium.	*Jacq. coll.* 5. 74. *ic. rar.* 2. *t.* 422. *Willd. loc. cit.*



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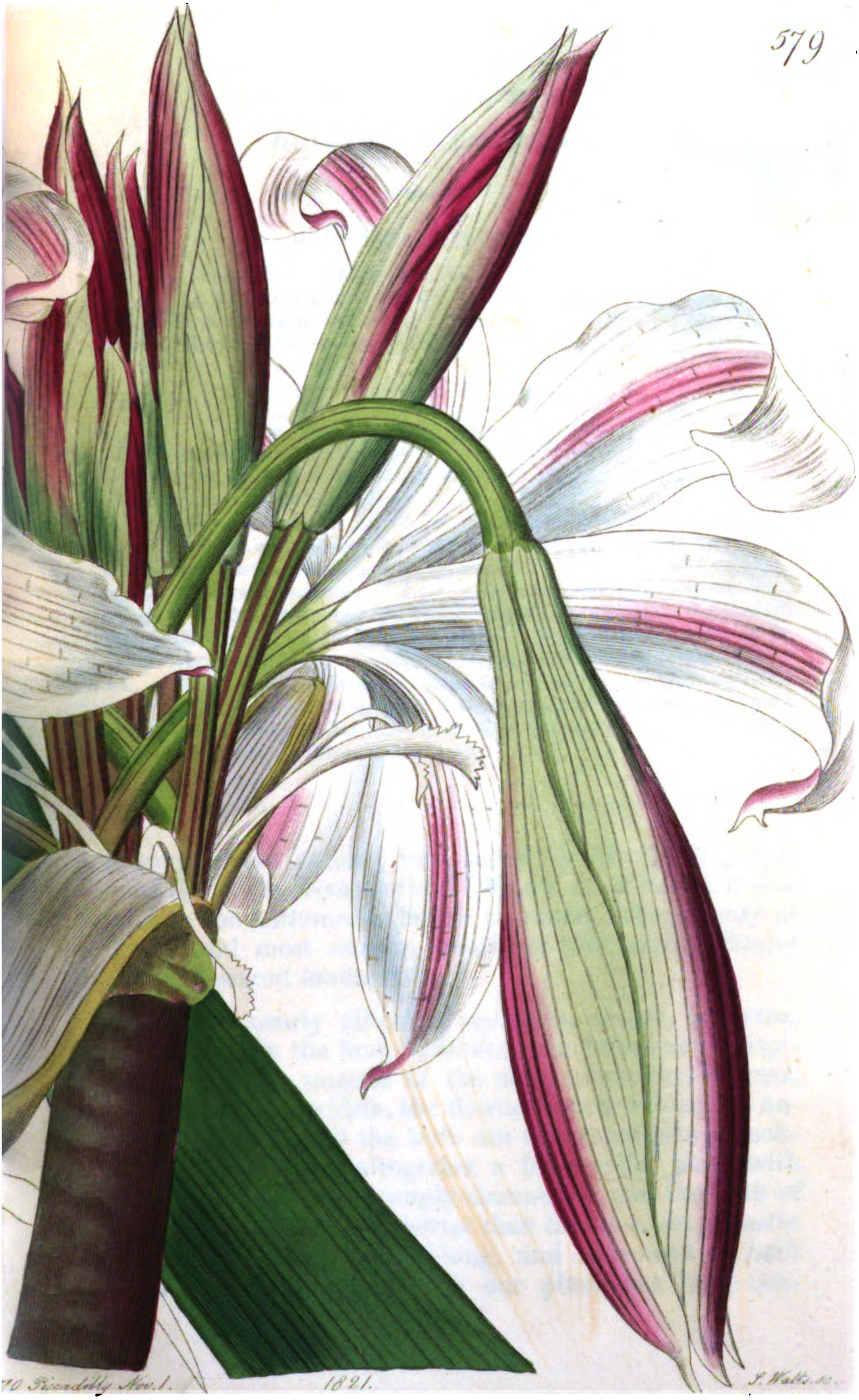

70 Piccadilly Nov. 1. 1821. J. Watts sc.

AMARYLLIS insignis.

Roxburgh's Amaryllis.

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HEXANDRIA *MONOGYNIA.*

Nat. ord. NARCISSI. *Jussieu gen.* 54. *Div. II.* Germen inferum. AMARYLLIDEÆ. *Brown prod.* 1. 296. *Sect. I.* Radix bulbosa. Flores spathacei umbellati, rarò solitarii.

AMARYLLIS. Suprà vol. 3. *fol.* 226.

Div. Bulbispermæ; foliis multifariis.

A. *insignis* (sessiliflora) foliis numerosis patentibus lorato-acuminatis planiusculis margine scabro; floribus subdenis limbo nutante patentissimo obsoletè bilabiato subæquante tubum.

Crinum latifolium. *Roxburgh corom. ined. (exclusis synonymis). Nobis in journ. of science and the arts.* 3. 114; *(excluso synonymo* AMARYLLIDIS latifoliæ *cum omni synonymiâ).*

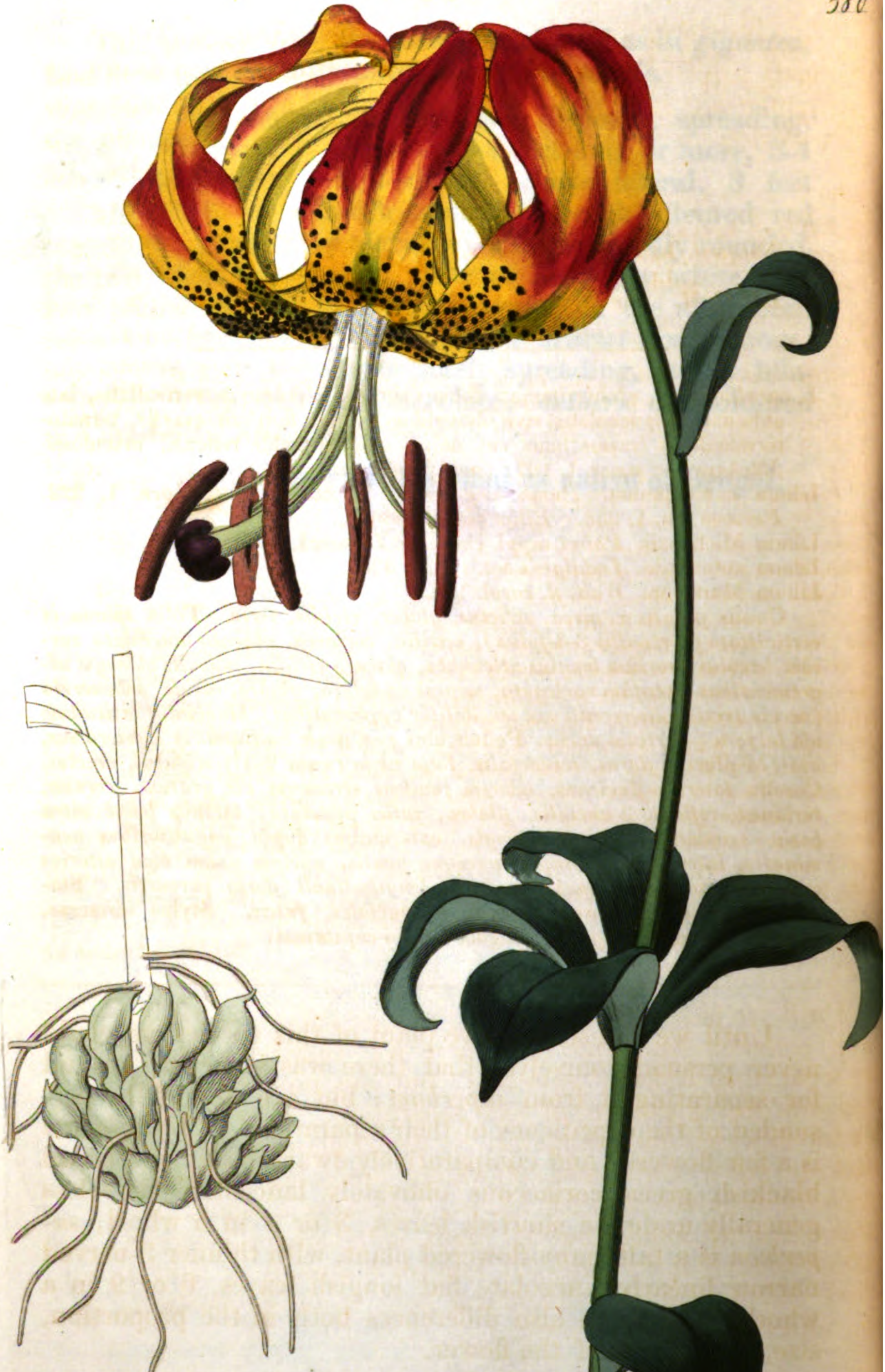
Bulbus *porraceo-caudescens.* Folia *numerosa, multifariàm patentia, lato-subulata (lorato-attenuata), gramineo-virentia, non glauca, 3-4-pedalia v. ultrà, latitudine 3-4 unciali, margine scabro.* Scapus *lateralis, 3-pedalis, totus dilutè-purpurascens, rore tenuissimo canescens, tereti-compressus.* Flores *subdeni, sessiles, roseo-candicantes, pomeridiani ut in proximè affinibus* ornatâ, zeylanicâ, *&c., novemunciales,* bracteis *conspicuis interstincti;* tubus *virescens:* limbus *campanulato-patens, obsoletè bilabiatus, laciniis oblongis lanceolatis.* Antheræ *ex luteo cinerascentes.*

A magnificent species, introduced by Mr. Griffin, who received the bulbs from Ceylon. Plants of it flowered this summer in the hothouse at South Lambeth, where many of the finest and most curious plants of this natural family have first appeared amongst us.

Insignis is nearly allied to *zeylanica*, *ornata*, *gigantea*, and *latifolia*. In the first, however, the leaves are conspicuously undulate, smooth at the edge, narrower, shorter, and with a thicker midrib, the flowers much redder, the anthers dark brown, and the bulb not elongated into a leek-like neck. *Ornata* is altogether a far smaller plant with fewer leaves, which are strongly channelled, and the limb of the corolla is considerably shorter than the tube. In *gigantea* the leaves are broad and oblong, and narrowed at both ends. In *latifolia*, with which our plant has been confounded by Roxburgh, the leaves are shaped as in *gigantea*, but the flowers are peduncled, instead of sessile.

Leaves numerous, multifariously disposed, spreading, broadly subulate, not glaucous, 3-4 feet long or more, 3-4 inches broad, flat, rough-edged. *Scape* lateral, 3 feet high or more, of a palish somewhat peach-coloured red throughout, clouded by a grey hoar, compressedly rounded. *Flowers* sessile, about ten, more or less, rosy white, like those of the nearest relatives flowering in the afternoon; about nine inches long, intermediate *bractes* conspicuous; *tube* greenish; *limb* campanulately spreading, faintly bilabiate; *segments* oblong, lanceolate; *anthers* ash-coloured and yellow.

Dr. Roxburgh speaks of his plant as native of Bengal.



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LILIUM carolinianum.

Carolina Martagon.

HEXANDRIA *MONOGYNIA.*

Nat. ord. LILIA. *Jussieu gen.* 48.
LILIACEÆ. *Brown MSS.*
LILIUM. *Suprà vol.* 2. *fol.* 182.

L. *carolinianum*, glaberrimum: foliis enerviis, plerùmque verticillatis, latè subcuneato-lanceolatis sive obovalibus: ramis floriferis crassis, ternato-terminalibus (rariùs binis aut unico) corollis valdè reflexis, maculosis. *Michaux bor. amer.* 1. 197; *(non Lamarckii).*
Lilium carolinianum. *Pursh amer. sept.* 1. 229. *Nuttall gen.* 1. 222. *Persoon syn.* 1. 358. *Elliot sket.* 1. 388.
Lilium Michauxii. *Poiret suppl. encyc. de Lamarck.* 3. 457.
Lilium autumnale. *Loddiges's bot. cab. n.* 335.
Lilium Martagon. *Walt. fl. carol.* 123.

Caulis *pedalis v. circa, strictus, glaber, viridis, teres.* Folia *sparsa et verticillata (verticillis 3-4-foliis), sessilia, coriacea, obovato-lanceolata sursùm breviùs deorsùm longiùs attenuata, obscuro-viridia, maculis oblongis nigrescentibus interdùm variegata, sæpiùs undulata, glabra, nitida, subenervia (nervis trinis folio recenti vix sensibilitèr apparentibus), biuncialia latitudine ubi latiora ¾ partium unciæ.* Pedunculus *cum caule continuus et æquicrassus, uni-(bi-pluri?) florus, sesuncialis, folio vago (nunc 2-3?) stipatus, erectus.* Corolla *lateritio-flavicans, odorem fundens strenuum vix gratum, cernua, turbinato-reflexa, 3-uncialis, glabra, intùs punctata: laciniis longè citra basin revolutis, elongato-oblongis,* exterioribus *duplo angustioribus acuminatis, interioribus abruptè brevèque acutis, unciam unam cum alterius quartâ parte latis, lineâ quadratâ longitudinali dorso percursis.* Stamina ⅓ *corollâ breviora;* antheræ *semunciales, fuscæ.* Stylus *virescens, elongato-clavatus, trigonus:* stigma *trilobo-capitatum.*

Until we had seen a live plant of this species we could never persuade ourselves that there was sufficient ground for separating it from *superbum;* but are now fully persuaded of the expediency of their separation. *Carolinianum* is a few-flowered and comparatively dwarf plant, with broad blackish green coriaceous obovately lanceolate nerveless generally undulate shortish leaves, 3 or 4 in a whorl; *superbum* is a tall many-flowered plant, with thinner 3-nerved narrow linearly lanceolate flat longish leaves, 6 or 9 in a whorl. There are also differences both in the proportion, size, and colour of the flower.

This species has been very lately imported by Messrs. Loddiges from Florida. It flowers two months later than *superbum,* viz. in September and October. In the winter the plant requires the shelter of a greenhouse or garden-pit, being tenderer than *superbum.*

Messrs. Elliot and Nuttall, in their respective works, suggest some doubts concerning the specific difference of the two; but state no reason for their doubt, and keep the two plants distinct, like their predecessors. Mr. Elliot remarks, that *carolinianum* is not a common plant; and belongs to the damp soils of the low country of South Carolina. We have purposely omitted the figures of both in Catesby's work; as quite worthless in point of illustration.

The drawing was taken at the nursery of Messrs. Colvill, in the King's Road, Chelsea.

Bulb scaly, of a dirty greenish white. *Stem* about a foot high, round, green. *Leaves* some scattered some in whorls, about two inches in length and about ¼ of an inch in breadth, short-pointed. *Peduncle* as thick as the stem, 1-3-flowered, upright, continuous with the stem, about six inches long. *Corolla* tawny-red and yellow, spotted on the inside, three inches long when extended, if smelled near of a strong pungent rather unpleasant scent: *inner segments* twice the broadest (1 and ¼ of an inch in breadth), short pointed.

Lilium *carolinianum* of Lamarck is Lilium *Catesbæi* of other authors.

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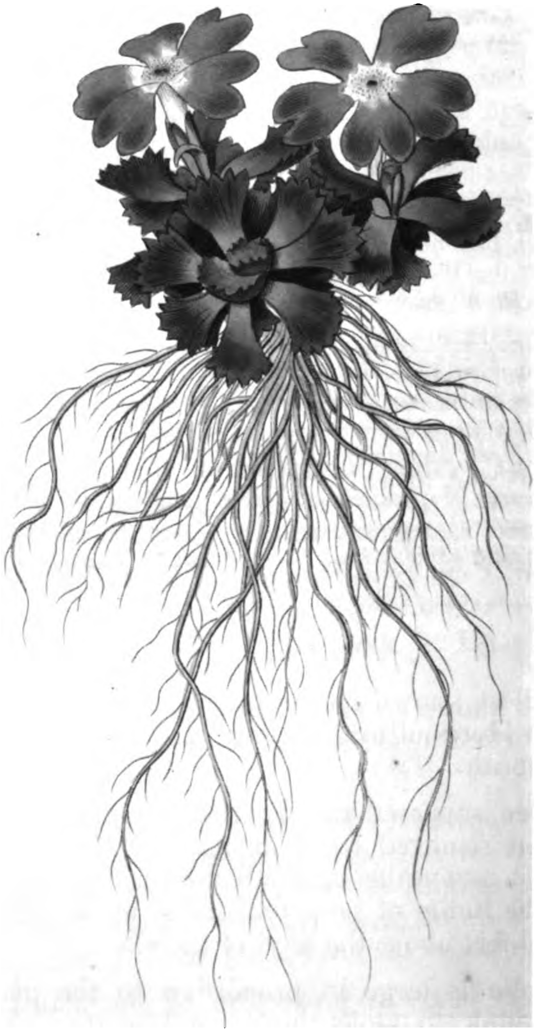

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PRIMULA minima.

Smallest Auricula. Snow-rosette.

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PENTANDRIA *MONOGYNIA.*

Nat. ord. LYSIMACHIÆ. *Jussieu gen.* 95. *Div. II.* Flores scapo insidentes, umbellati involucro polyphyllo, aut rariùs solitarii. *Folia radicalia.*

PRIMULACEÆ. *Brown prod.* 1. 427.

PRIMULA. Suprà fol. 539.

P. ***minima***, foliis cuneiformibus nitidis apice multidentatis, scapo subunifloro foliis breviore, corollæ laciniis semibifidis Y græcum referentibus, fauce villosula. *Lehmann monog. prim.* 85.

Primula minima. *Lin. sp. pl. ed.* 2. 1. 205. *Jacq. enum. pl. agr. vind.* 208. *obs. bot.* 24. *t.* 14. *misc.* 1. 160. *fl. austr. n.* 273. *t.* 273. *Host synops.* 98. *Suter fl. helv.* 1. 113. *Braune fl. salisburg. n.* 169. *Schrank fl. salisb.* 65. *Willd. sp. pl.* 1. 805. *Schmidt fl. bohem.* 46. *Willd. enum.* 1. 192.

Primula foliis cuneiformibus nitidis, scapis unifloris. *Hall. helv. n.* 614.

Auricula-Ursi minima. *Clus. hist.* 1. 305; *cum ic.*

Rad. *crassitie pennæ anserinæ et ultrà, per ætatem nigrescens: fibris albidis.* Fol. *cuneiformia, unguicularia, in rosulas collecta, glaberrima, nitida, coriacea, apice profundè dentata: dentibus acutis.* Scapus *obsoletè triangularis foliis brevior, uniflorus rariùs biflorus.* Invol. *submonophyllum, oblongum, paleaceum.* Cal. *tubulosus, 5-fidus: laciniis rotundatis brevibus obtusis.* Cor. *carnea (v. violacea), subsessilis, sæpè magnitudine totius plantæ; ad faucem villis albidis: limbo patente: laciniis semibifidis* Y *græcum referentibus.* Caps. *obtusissima, nitida. Variat floribus albis, limbi laciniis et latioribus et angustioribus.* Lehmann l. c.

The smallest known species of its genus. Lately introduced by the Horticultural Society. Drawn in their garden at Hammersmith.

It has been supposed to be extremely impatient of cultivation when removed from its natural abode, the tops of the highest mountains of the South of Europe, which it ascends to the limits of perpetual snow, at the elevation of 7000 to 8000 feet above the level of the sea.

The corolla is large in proportion to the plant, and varies from pink to violet-purple and white: sometimes it equals all the rest of the plant together. The herb of the wild sample is still more diminutive than in the cultivated one.

Rootstock about as thick as a large quill, blackish when old; fibres white. *Leaves* cuneate, half an inch long, disposed in rosettes, very smooth, shining, coriaceous, deeply toothed at the end with pointed teeth. *Scape* obsoletely 3-cornered, shorter than the leaves, 1- seldom 2-flowered. *Involucre* nearly of one piece, oblong, chaffy. *Calyx* tubular, 5-cleft: segments rounded short obtuse. *Corolla* subsessile, often as large as all the rest of the plant together; *faux* furnished with a whitish nap: *limb* spreading: *segments* cleft in two for half their length, like the letter Y. *Capsule* very blunt, shining.

Not having had the opportunity of examining the plant ourselves, we have offered a version of the description in Mr. Lehmann's Monograph of the genus.

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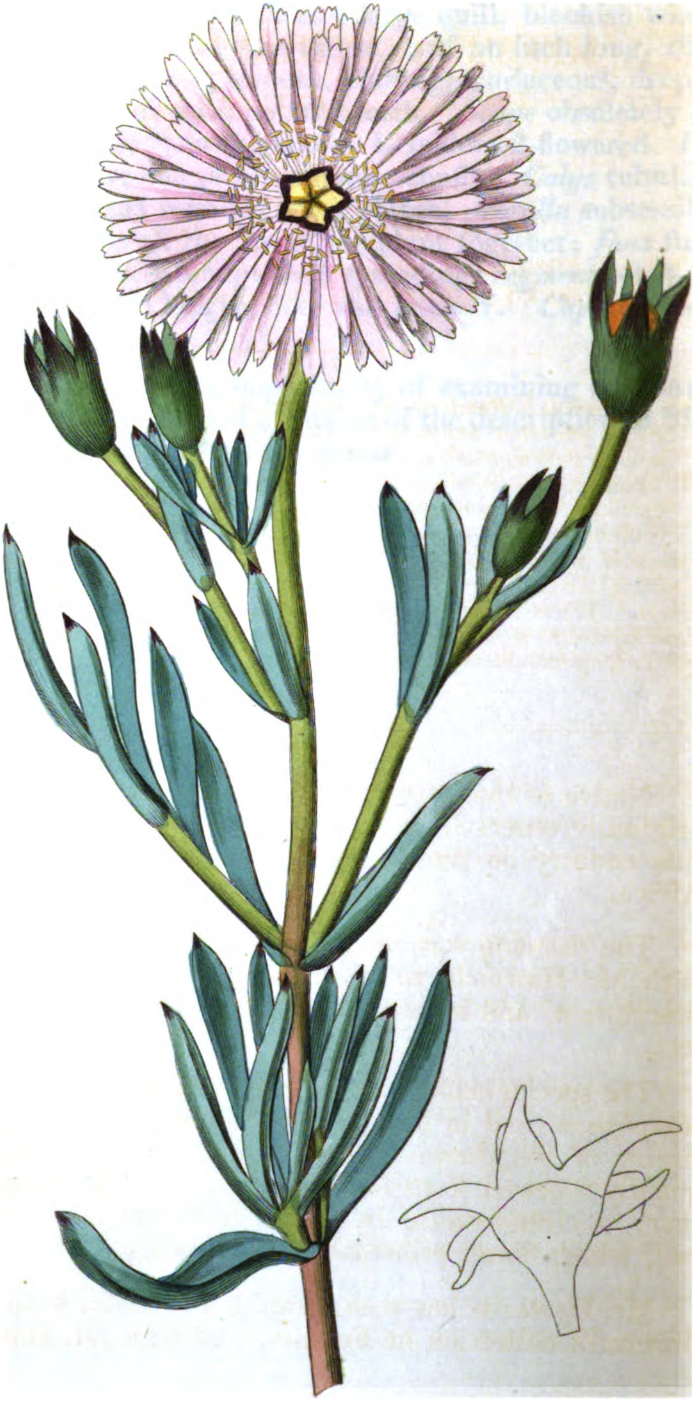

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MESEMBRYANTHEMUM blandum.

Fair-flowered Fig-Marygold.

ICOSANDRIA *PENTAGYNIA.*

Nat. ord. FICOIDEÆ. *Jussieu gen.* 315. *Div. II.* Germen inferum.
MESEMBRYANTHEMUM. Suprà vol. 3. *fol.* 260.

Div. Conspicua. *Ramis fruticosis numerosis adscendentibus, foliis confertis longis triquetris angustis subacutis lævibus glaucis v. viridibus, petalis magnis latis multiseriatis, albis v. rubicundis.* Haworth MSS.

M. *blandum,* foliis solido-triquetris subtrientalibus glaucescentibus; floribus candidis planis, antè anthesin dilutissimè erubescentibus. *Haworth MSS.*

Suffrutex *pedalis v. ultrà.* Rami *erectiores atque distantiores quàm in* conspicuo *proximè affini; folia quoque laxiora quàm in eo, et sæpè in ramis floriferis longitudine tantummodò internodiorum: plerumque subglaucescentia.* Flores *numerosi, speciosi, sæpè ternatìm terminales, sudo cœlo manè expandentes, denuòque explicatìm emorientes. Reliqua ferè ut in* conspicuo *et* spectabili. *Haworth MSS.*

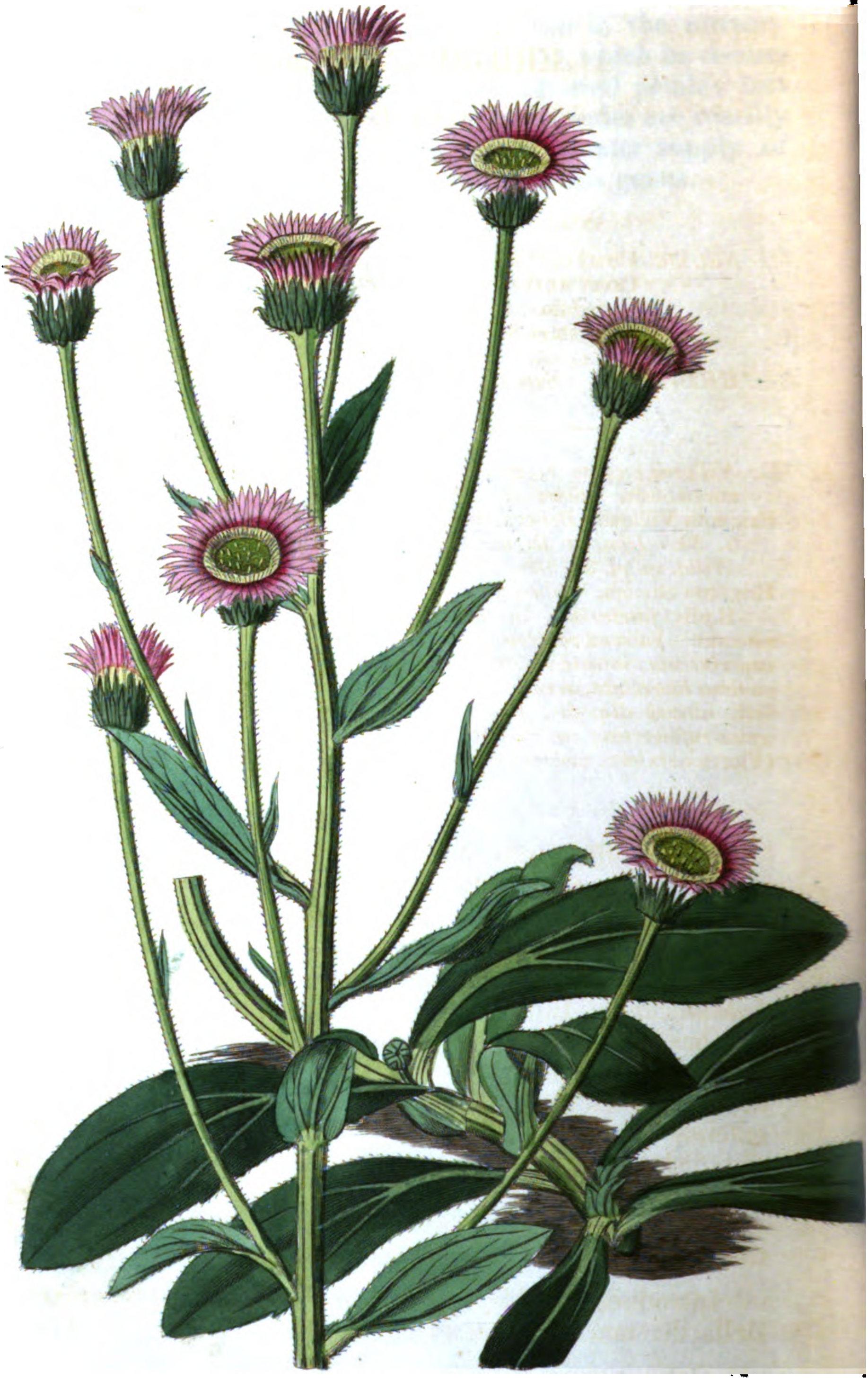
Native of the Cape of Good Hope, where the plant was originally observed by Mr. Burchell, and introduced into this country on returning from his expedition into South Africa.

The drawing was made from a sample which flowered with Mr. Haworth, to whom we are obliged for the above description, and indeed for all we have to say on the subject.

The species belongs to the same section as *spectabile* and *conspicuum,* and in Mr. Haworth's opinion is the more desirable of the three: blossoming abundantly; and if frequently renewed from cuttings at almost all times of the year; a circumstance by which it differs from the other two, which flower principally in the spring.

Mr. Haworth has seen samples in bloom, both in Mr. Burchell's collection at Fulham, and with Dr. Hooker, at

Halesworth, in Suffolk. He has also seen in the nursery of Mr. Ross, of Stoke Newington, a plant which he deems a variety of the species, with narrow inbowed petals; but it did not blossom in perfection. Both varieties are readily propagated by cuttings, but require a greater supply of fresh air and water than the generality of this genus.



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ERIGERON Villarsii.

Villars's Erigeron.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. II.* Receptaculum nudum. Semen papposum. Flores radiati. In TUSSILAGINE et SENECIONE flores partim flosculosi.
ASTEREÆ. *Cassini in journ. de phys.* 88 (*an* 1819). 191.
ERIGERON. *Suprà vol.* 1. *fol.* 10.

E. *Villarsii;* caule erecto, foliis oblongo-lanceolatis trinervosis, floribus corymbosis. *Villars delph.* 3. 237; (*sub* E. attico.)

Erigeron Villarsii. *Bellardi app. ad fl. pedem.* 38. *t.* 7. *Hort. Kew. ed.* 2. 5. 33. *Lam. et Decand. fl. franç.* 4. 143. *Lamarck encyc.* 8. 489. *Willd. sp. pl.* 3. 1958. *Ejusd. enum.* 2. 873.

Erigeron atticum. *Villars ubi suprà.* *Persoon syn.* 2. 431.

Radix *fasciculata, biennis.* Caulis *pedalis, striatus, fistulosus, levitèr viscosus.* Folia *ad radicem oblonga (spathulata* Lam.) *petiolo membranaceo, asperiuscula, intensè viridia, tribus v. quinque nervis striata, obitèr dentata: caulina lanceolata, sessilia integerrima. Ex caule flores prodeunt pedunculati, alternè dispositi, ferè corymbosi.* Calycis *foliola hirsutula, viscosa apice rufescentia; cæterum structura eadem ac in* unifloro, alpino, *et* acri. (Flores *cærulei v. violaceo-rubentes.* Seminum *pappus albus.*) Bellardi l. c.

In the differential phrase applied by Willdenow to this species in the Species Plantarum, and adopted in the Enumeratio, as well as in Hortus Kewensis, the ray of the flower is stated to be shorter than the disk, and the circumstance selected as the main distinction between *Villarsii* and *philadelphicum.* But this character is obviously erroneous, and has been probably assumed by Willdenow from a hasty inspection of Bellardi's engraving of the plant, where some of the flowers being represented in seed, when the pappus extends itself beyond the ray, he has mistaken this for the disk in flower. Bellardi expressly states, that the flower is of the same structure as in ERIGERON *alpinum, uniflorum,* and *acre,* where the ray is as usual higher than the disk.

Introduced by Mr. Holboël in 1804. Called biennial by Bellardi: marked as perennial in Hortus Kewensis. Generally cultivated with us in a garden pot, and sheltered in a pit or frame during winter.

Drawn at Messrs. Colvill's, in the King's Road, Chelsea.

Stem about a foot high, fluted, hollow, slightly viscid. *Root-leaves* spatulately oblong with a membranous petiole, roughish, deep green, marked with either three or five nerves, lightly toothed, *stem ones* lanceolate, sessile, quite entire. *Flowers* alternate upon the stem and peduncle, so as to form nearly a corymb. Leaflets of the *calyx* rather roughishly furred, viscid, reddish at the points. *Flowers* either blue or pinkish red. The pappus of the seed white.

We had no opportunity of examining the plant for description; and have borrowed the above remarks from Bellardi and Lamarck.

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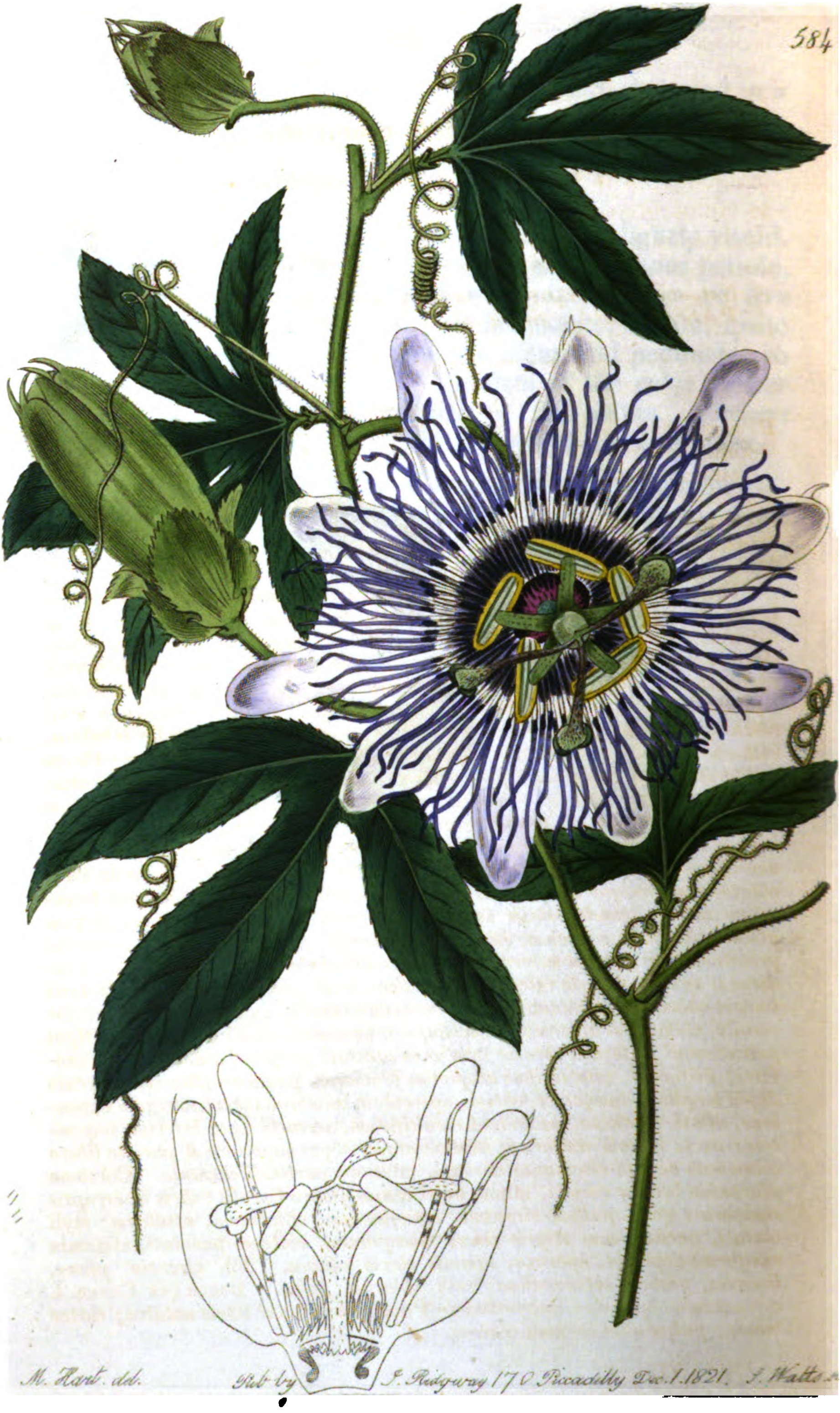

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PASSIFLORA filamentosa; β.

Palmate-leaved Passionflower.

MONADELPHIA *PENTANDRIA.*

Nat. ord. PASSIFLOREÆ. *Jussieu in ann. du mus.* 6. 102.
PASSIFLORA. *Suprà vol.* 1. *fol.* 13; *et fol.* 574 *vol. præsentis.*

Div. Foliis multifidis.

P. *filamentosa*, foliis palmatis 5-(3-7-)partitis serratis, petiolis glandulosis, involucro triphyllo serrato, filis coronæ corollâ longioribus (v. subbrevioribus). *Willd. sp. pl.* 3. 623.
Passiflora filamentosa. *Cavan. diss.* 10. 461. *t.* 294.
(β) corona floris subbrevior corollâ.
Passiflora filamentosa. *Curtis's magaz.* 2023.
Passiflora palmata. *Loddiges's bot. cab. n.*

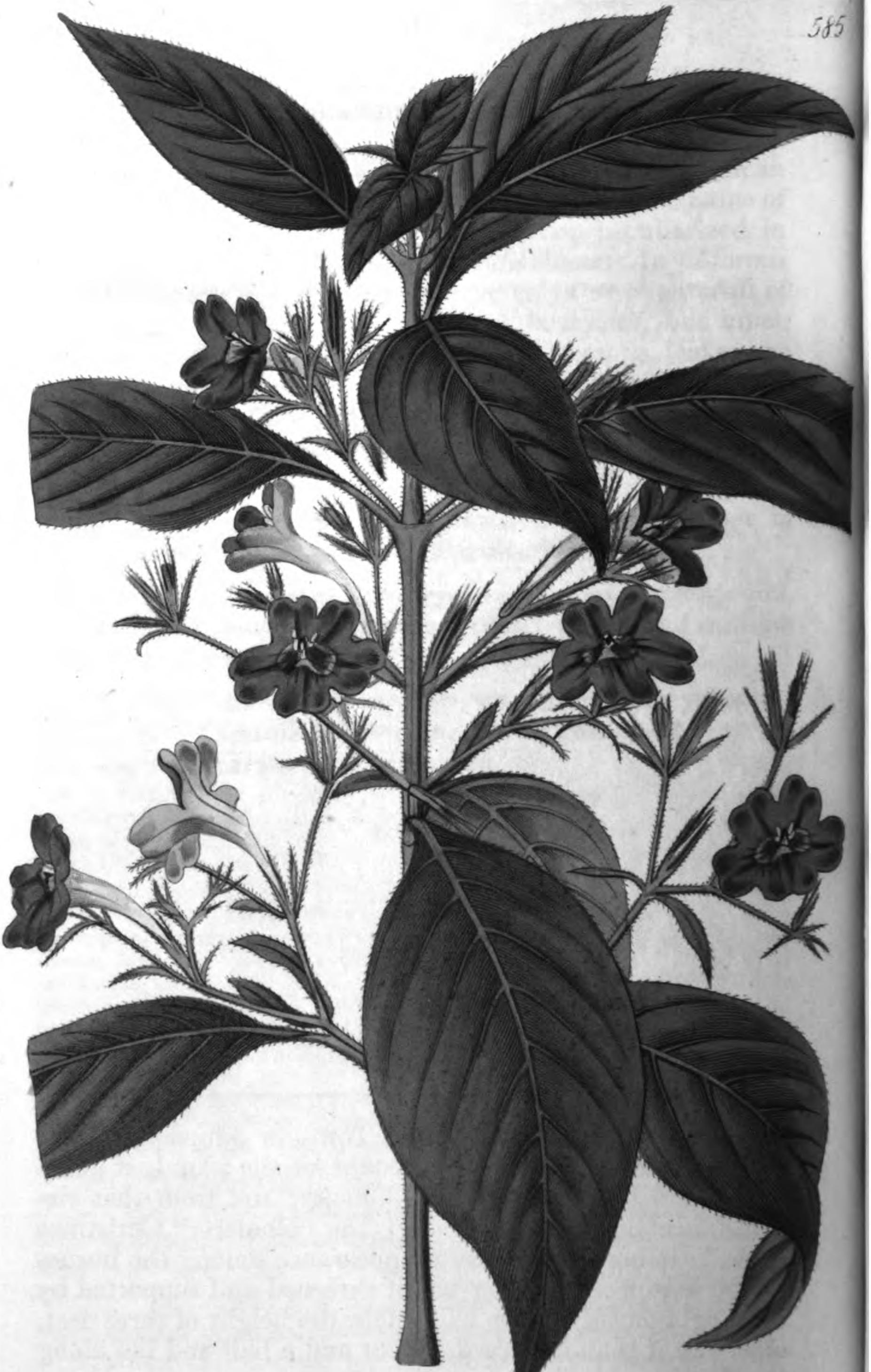
Frutex *altè scandens, ramis subteretibus flexuosis, villosis; junioribus herbaceis.* Fol. *alterna, distantia, oblata, latitudine 3-6-unciali v. ultrà, 5-nervia, villosa, palmato-divisa lobis 3-5-7, sæpiùs 5, ovali-lanceolatis dentato-subsinuatis denticulis plerùmque setâ præfixis: suprà nitidiuscula viridissima, subtùs conspicuiùs pubescentia:* pet. *villosus, teretiusculus, canaliculatus, subtriplo folio brevior, intùs supra medium carunculis binis elevatis glandulam secernentem foventibus appendiculatus:* stipulæ *subulatæ, villosæ, parvulæ, sphacelatæ, caducæ:* cirrhi *villosi, elastico-rigentes.* Flores *axillares, solitarii, uncias 2 profundi:* pedunculus *teres, subvillosus, robustus, 2-3-plove longior petiolo.* Involuc. *foliaceum flori approximatum urceolum æquans v. exsuperans, foliolis ovato-oblongis v. orbiculatis, serratis, dente infimo utriusque lateris sæpius glanduloso-producto saturatiùs virente, apice umbilicato.* Cal. *molli-coriaceus, extùs virescens, lanuginosus,* urceolo *brevi oblato-campanulato lineis 10 superficialibus saturatioribus notato nec toroso neque sulcato, fundo subtùs intruso,* segmentis *naviculari-oblongis, sursùm attenuatis acumine obtuso, intùs concaviusculis candicantibus, extùs carinâ prominente in rostrum incurvulum compresso-subulatum productâ.* Cor. *candicans, summo urceolo inserta, calyce longior et plurimùm tenuior, laciniis lineari-oblongis subundulatis, apice rotundatis muticis:* corona $\frac{1}{4}$ *circà brevior corollâ, violaceo et albo variegata, duplex, numerosa;* radii *exteriores contigui patentissimi filiformes obtusi:* interiores *saturatè purpurei ordine plurali conferti; filiformes, exterioribus aliquoties breviores, paulò graciliores, operculo duplo longiores, inæquales, obtusi:* operculum *membranaceum, nectario incumbens, dilutè rubescens, medio tenùs multifidum, nectarii septo inferiori impositum:* nect. *urceolo conforme, bicameratum,* septo superiore *à pariete libero columnam adnato-circinante dentato,* inferiore *parietali edentulo.* Columna *plurimùm brevior corollâ,* stipite *brevi crasso glabro lineolis rubris interruptis consperso:* germ. *pallidè virescens, lanuginosum, ellipticum, exsulcum;* styli *clavati, germen cum stipite simul subæquantes, violaceo-punctati,* stigmata *reniformi-depressa, opacata, summis clavis adnata.* Fil. *virentia, plana, linearia, glabra, submaculosa:* anth. *oblongæ, flavæ.* Bacca (ex Cavan. l. c.) *pendula, sphærica, magnitudine Pomi, sulcis 6 aut lineis notatus; cortex tenuis; pulpa alba carnosa mucosa.*

Although distinguishable by several available differences, our plant in general appearance comes near to the North American *incarnata* (vol. 4. fol. 332 of this work), and seems intermediate between that and the South American plant (vol. 2. fol. 152) since separated by the specific name of *edulis*. The three appear to form a group peculiarized in the genus by a glandularly serrated involucre. In *filiformis* the urceolus (tubular portion of the calyx or outer wall of the nectary) is much deeper than in *incarnata*, but much shallower than in *edulis*; and the lobes of its leaves are more numerous than in either of the others, where they are constantly three, while in this they vary from three to five and not seldom to seven; five being however the usual number.

Drawn from a plant which flowered last September in a stove in the garden of the Horticultural Society.

It is a free-flowering, free-growing, ornamental species, and said to have been lately imported by Messrs. Loddiges from South America.

(α) which differs very slightly, was raised some years ago by Professor Cavanilles in Spain, in the garden at Issy belonging to the Duke dell' Infantado.



M. Hart. del. Pub by J. Ridgway 170 Piccadilly Dec. 1. 1821. S. Watts. sc.

RUELLIA paniculata.

Christmas Pride of Jamaica.

DIDYNAMIA *ANGIOSPERMIA.*

Nat. ord. ACANTHI. *Jussieu gen.* 102. *Div. I.* Stamina 4 didynama.
ACANTHACEÆ. *Brown prod.* 1. 472.

RUELLIA. *Cal.* 5-partitus (nunc profundè 5-fidus), æqualis. *Cor.* infundibuliformis, limbo 5-fido, parùm inæquali, patenti. *Stam.* 4 antherifera inclusa: *Antheræ* loculis parallelis, muticis. *Germinis* loculi polyspermi. *Caps.* teretiuscula, subsessilis, dissepimento adnato. *Semina* retinaculis subtensa. *Herbæ oppositifoliæ, caulescentes, sæpè pilosæ. Flores axillares v. terminales.* Brown prod. 1. 477.

R. *paniculata*, foliis integerrimis, pedunculis dichotomis lateralibus, calycibus sessilibus: laciniâ supremâ majore. *Lin. sp. pl. ed.* 2. 2. 885.
Ruellia paniculata. *Mill. dict. ed.* 8. *n.* 5. *Swartz obs.* 244. *Willd. sp. pl.* 3. 367. *Hort. Kew. ed.* 2. 4. 57.
Speculum Veneris majus impatiens. *Sloane jam.* 1. 158. *t.* 100. *fig.* 2.
Ruellia 1. procerior, subcinerea, hirsuta; pedunculis ramosis, flore multiplici. *Browne jam.* 261.

Caulis *suffrutescens, 2-3-pedalis, ramosus, sæpè prostratus, 4-gonus glaber, versùs apicem pubescens.* Rami *præcipuè ex paniculis formantur.* Fol. *petiolata, opposita, ovato-lanceolata, subserrata, nervosa, hirsutiuscula v. scabra; caulina majora; ramea sæpè decidua:* pet^{l}. *breves.* Paniculæ *ex ramis oppositis dichotomis divaricatissimis; pedicellis 1-floris, floribus majusculis cæruleis v. purpurascentibus.* Cal. *5-phyllus:* foliola *linearia, longa, erecta, hirsuta: hirsuties glandulosa.* Cor. *infundib.* tubus *calyce duplo longior; limbo dilatato posticè gibbus, anticè planus:* limbus *5-fidus:* laciniæ *subæquales; posteriores 2 vix breviores, 3 anteriores patentiores; omnes subrotundæ, concavæ, incumbentes.* Faux *compressa pallidè cærulea.* Fil. 4, *è basi tubi, duo dimidio breviora (rectiùs vix inæqualia) per paria approximata:* anth. *erectæ, acuminatæ, albæ, 2-valves.* Germ. *oblongum, acuminatum:* stylus *longitudine tubi, filiformis:* stig. *2-fidum, alterâ laciniâ longiore.* Caps. *acuminata, calyce cincta, 2-loc. ungue elasticosè aperiens:* sem. *subrotunda, compressa, nigra.* Tota herba subviscosa odorata, odore ad Camphoram accedente (quod in exemplari nostro non notavimus). *Swartz l. c.*

Very common about Spanish Town in Jamaica, where, according to Browne in his account of the island, it generally blows in December and January, and from that circumstance has been named by the colonists "Christmas Pride." It makes a beautiful appearance among the bushes for the season of the year; and if skreened and supported by the neighbouring shrubs will attain the height of three feet, otherwise it seldom exceeds a foot and a half and lies along the ground.

Cultivated by Miller in 1768; but we had never met with the plant before last summer, when it flowered in the hothouse of Mr. Lee of the Hammersmith nursery, having been raised from seed from Jamaica.

The genus has been entirely recast in the Prodromus of Mr. Brown; and defined as follows: *Calyx* 5-parted (sometimes deeply 5-cleft), equal. *Corolla* funnelform, with a 5-cleft spreading slightly unequal limb. *Stamens* 4, all antherbearing, inclosed; *anthers* with parallel unappendicated cells. Cells of the *germen* manyseeded. *Capsule* roundish, subsessile, with the partition grown to the valves. *Seeds* subtended by brackets (bracketted). The group thus circumscribed consists of herbaceous caulescent opposite-leaved frequently furred plants; with either axillary or terminal flowers.

The species with two-seeded cells, in the genus, are thus excluded, and distributed into other groups.

Stem 2-3 feet high, branching, frequently lying along the ground, 4-cornered, smooth, furred at the upper part; the branches consist chiefly of the divisions which constitute the panicle. *Leaves* petioled, ovately lanceolate, subserrate nerved, either slightly hirsute or else roughened; stem-ones the longest; those of the branches frequently falling off while in flower: *petioles* short. Branches of the *panicle* opposite dichotomous-divaricate; *pedicles* one-flowered, flowers largish, either blue or purple. Segments of the *calyx* long, linear, upright, hirsute, the pubescence glandular. Tube of the *corolla* twice the length of the calyx, wide above, gibbous behind, and flat before; segments of the limb nearly equal; two hinder ones scarcely shorter than the rest, three front ones more spreading; all nearly round concave and lapping at the sides: *faux* compressed and paler. *Filaments* from the base of the tube, two shorter by half than the rest (this seems a mistake, as there is scarcely any inequality mentioned by others) nearing by pairs: *anthers* upright, white, bivalved. *Germen* oblong, taper-pointed: *style* the length of the tube filiform: *stigma* bifid, with one lobe longer than the other. *Capsule* taper-pointed, enclosed by the calyx, bilocular, bursting elastically upon the claw: *seeds* nearly round, compressed black. The whole plant said to be slightly viscid, with a smell that approaches in some degree to that of Camphor.

We had no opportunity of describing the plant ourselves.

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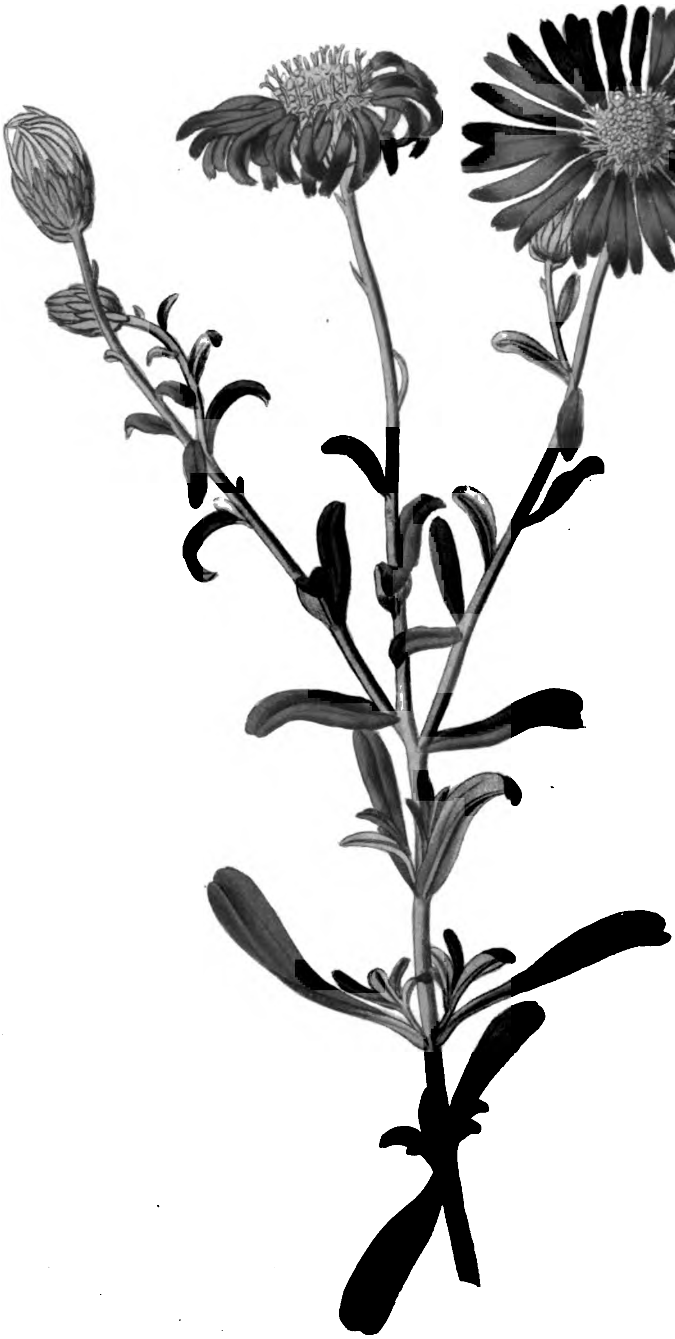


M. Hart del. Pub by J. Ridgway 170 Piccadilly Dec. 1. 1821. J. Watts sc.

AMELLUS Lychnitis.

Cape Amellus.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.

CORYMBIFERÆ. *Jussieu gen.* 177. *Div. VII.* Receptaculum paleaceum. Semen papposum, pappo plumoso aut piloso aut aristato. Flores sæpiùs radiati.

AMELLUS. Cal. subhemisphæricus, imbricatus squamis linearibus appressis. *Thalamus* paleaceus. *Flosc. disci* androgyni; *radii* feminei, ligulis oblongis cæruleis apice vix sensibilitèr 2-3-dentatis: utrique fertiles: *Sem.* difformia. *Pappus* omnis simplex: radii paleaceus; disci setaceus. *Gærtn. sem.* 2. 459. *Interdum unicus radius setaceus longior pappo seminum radii paleaceo admiscetur.* Id.

A. *Lychnitis,* caule fruticoso, foliis incanis lineari-lanceolatis oppositis, ramis alternis. *Willd. sp. pl.* 3. 2214.

Amellus Lychnitis. *Linn. sp. pl. ed.* 2. 2. 1276. *Mill. dict. ed.* 8. *n.* 1. *Berg. cap.* 298. *Thunb. prod.* 162. *Jacq. coll.* 5. 151. *t.* 10. *fig.* 1. *Hort. Kew. ed.* 2. 5. 118. *Gært. sem.* 2. 459. *t.* 173. *fig.* 3.

Verbesina asteroides. *Linn. sp. pl. ed.* 1. 2. 902.

Buphthalmum foliis oppositis lanceolato-linearibus obtusis integerrimis, calycibus subrotundis. *Hort. cliff.* 415.

Chrysanthemum v. potiùs Buphthalmum africanum leucoii foliis, asteris flore cæruleo. *Breyn. prodr. pl. rar. fasc.* 1. 17. *fasc.* 3. *t.* 15. *fig.* 2.

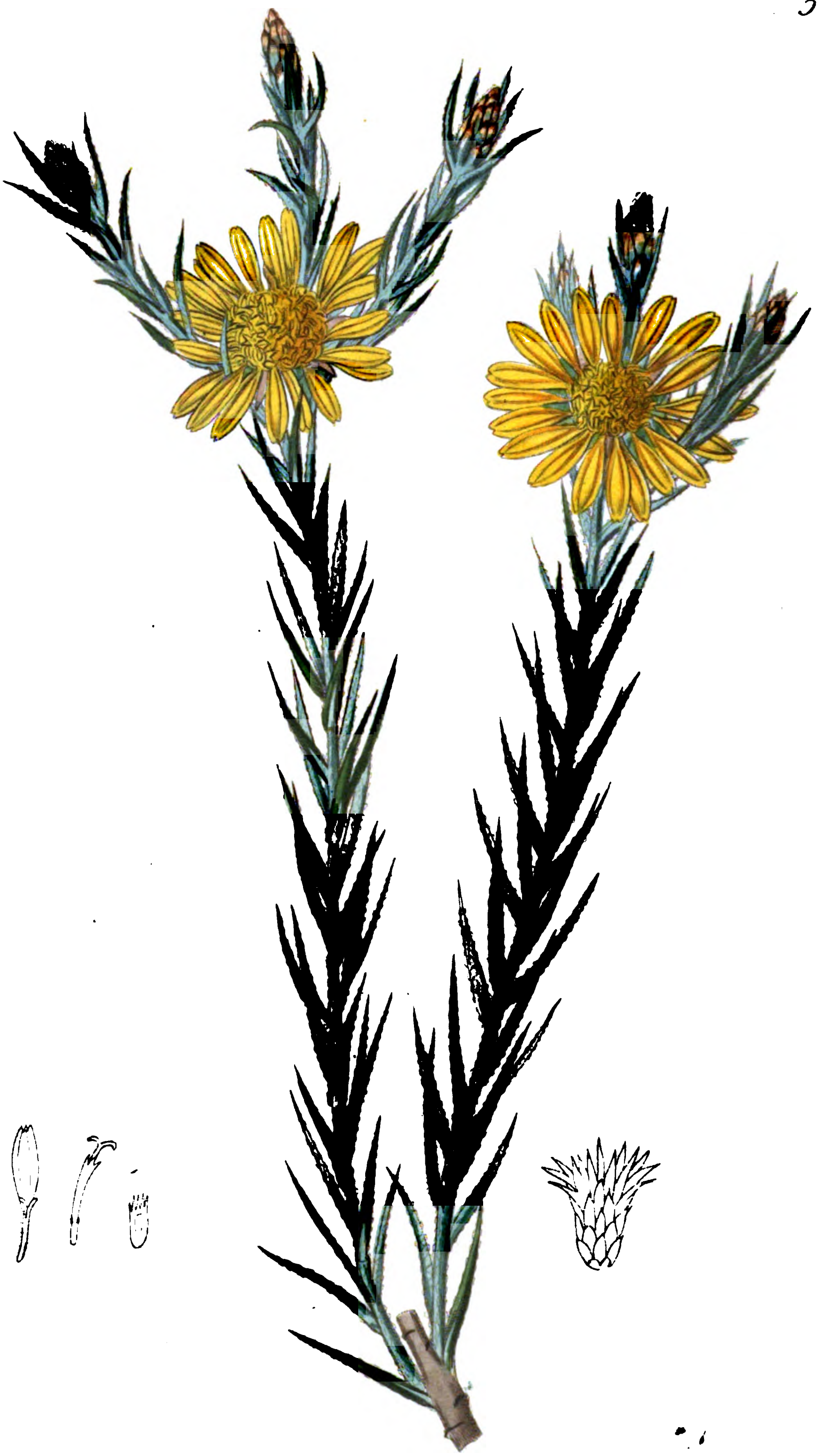
Suffrutex *sericeus,* 2-3-*pedalis:* caulis *teres crassitudine pennæ scriptoriæ, ramosus, ramis diffusis herbaceis.* Foliâ *cano-virentia, sessilia, alterna et opposita, elongato-oblonga, subcuneata acumine brevi, uncialia ad sesquiuncialia.* Pedunculi *terminales, solitarii,* 1-*flori, stricti, teretes, villosiusculi, erecti.* Cal. *radio bis brevior v. ultrà, herbaceus, turbinatus;* foliolis *recto-appressis, paulò inæqualibus lineari-acuminatis; dorso convexo, cuspide sphacelato-purpurascente.* Radius *femineus, lilacino-cærulescens, vesperè revoluto-contrahendus, manè iterùm evolvendus:* flosc. *laminâ obversè ligulatâ subplicatâ obsoletè tridenticulatâ,* tubo *eâ bis breviore gracili cylindrico gracili villoso.* Stylus *flavus,* stigmatibus 2 *linearibus parùm exsertis:* germ. *oblongum, obversum, angustum, angulosum, album,* pappo *paleaceo brevissimo è paleis paucis* (4-5-6?) *dentiformibus:* discus *hermaphrod., flavus, numerosus, altior calyce;* flosc^{i}. *infundib.,* tubo *bis breviore* fauce *longâ ampliusculâ cylindricâ infernè obsoletè villosâ supernè glabrâ,* limbo *flavo brevi reflexo.* Stylus *albus;* stig. 2, *exserta, linearia, flava, replicata, lobo villoso subsagittato-acuminato terminata.* Filamenta *flexuosa:* pollen *vitellino-flavescens.* Germ. *turbinatum, compressum, album,* pappo *albo setaceo denticulato brevi (longiore tamen radii) pauco rigido.* Recept. *paleaceum:* paleæ *disci flosculis æquales, scariosæ, fusco-mucronatæ.*

Cultivated by Miller in 1768; but still scarce with us, notwithstanding its easy culture and lively-coloured blos-

som. We had never indeed observed a plant of it in any of our gardens before last summer, when several flowered in the greenhouse of the nursery of Messrs. Colvill, in the King's Road, having been raised from seed from the Cape of Good Hope.

In the Hortus Kewensis the species is marked as a shrub; but we suspect it to be only suffrutescent and biennial; for none of the plants we had seen survived the season of their flowering.

Suffrutescent? silkily furred, branching, 2-3 feet high; *stem* about as thick as a common pen; *branches* long, straggling, herbaceous. *Leaves* greyish green, sessile, elongatedly oblong, subcuneate, with a short abrupt point; from an inch to an inch and a half in length or more, partly alternate, partly opposite. *Peduncles* at the ends of the branches, solitary, oneflowered, straight, round, slightly villous. *Calyx* twice shorter than the ray or more, turbinate, herbaceous, imbricate; *leaflets* not very unequal, upright, linearly taper-pointed, convex at the back, point sphacelate and purplish. *Ray of the flower* pistilbearing, of a lilac-blue, numerous, rolling itself up backwards in the evening, opening again in the morning; lamina of the *florets* obversely ligulate, 2-plaited, obsoletely indented at the end; tube twice shorter slender cylindrical villous: *style* deep yellow with two slightly protruded linear *stigmas: germen* oblong, tapered downwards, narrow, angular, white; *pappus (seedcrown)* chaffy extremely short consisting of a few (4-5-6?) teethlike paleæ: *florets of the disk* stamen and pistilbearing, deep yellow, numerous, higher than the calyx, funnelform; *tube* twice shorter than the long widish cylindrical partly smooth partly villous *faux; limb* short reflex: *style* white, *stigmas* 2, protruded, linear, deep yellow, recurved, ending in a subsagittately pointed villous lobe: *filaments* flexuose: *pollen* orange-yellow. *Germen* cuneate, compressed, white; *pappus* white setaceous denticulate short (but longer than in the ray) scanty: *receptacle* chaffy: *paleæ* equal to the florets of the disk, scariose, brown-pointed.



M. Hart del.   Pub by J Ridgway 170 Piccadilly Dec. 1. 1821.   J Watts sc.

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RELHANIA pungens.

Prickly Relhania.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. V.* Receptaculum paleaceum. Semen nudum seu non papposum. Flores plerùmque radiati, raró flosculosi. Pappus nunc brevis.

RELHANIA. (Pappo phyllode aut paleaceo. Thalamo paleaceo.) *Cal.* ovato-oblongus, imbricatus squamis cartilagineis appressis, apice appendiculatis scariosis. *Flosculi disci* androgyni; *radii* fœminei, ligulis ovato-lanceolatis integerrimis: utrique fertiles. *Pappus* foliolis quinis aut paucioribus, brevibus. *Gærtn. sem.* 2. 440 *(sub* ECLOPE). *Genus* ATHANASIÆ *affine, ut nihil sit aliud quàm* ATHANASIA *radio larvata.* Gærtn.

Div. Floribus solitariis.

R. *pungens,* foliis linearibus subpungentibus subtùs striatis, floribus sessilibus. *L'Hérit. sert. angl.* 24.

Relhania pungens. *Willd. sp. pl.* 3. 2138.

Fruticulus *pedalis et ultrà, debilis, ramosus,* ramis *duris, undique foliosis, supernè tomentoso-cinereis.* Folia *acerosa, rigida, sessilia, adscendentia, laxiùs sparsa, lineari-subulata,* $\frac{2}{3}$ *unciæ v. circà longa, integerrima, dorso convexa striata subtomentosa strigilosa virentia, intùs concava tomento denso candicantia, ab apiculo fusco aciculari subpungentia.* Flores *concolores, aurei, terminales, sessiles, solitarii, foliis partìm obvallati, unciam diametro excedentes.* Cal. *oblongus, turbinatus (deorsùm attenuatus) melino-subfuscescens, corollæ discum plurimùm exsuperans, infrà arctè imbricatus et areolis tomentoso-albis varius, suprà radiato-patens glaberrimus:* foliola *inæqualissima,* intima *spathulato-ligulata cum laminâ lanceolatâ sublatiore ungue.* Corollæ radius *plurimus:* flosc. *feminei, subcontigui,* laminâ *obversè ligulatâ edentulâ, biplicato-striatâ, subtùs secundùm medium longitudinis rubente, vesperè connivente flore convoluto-complicandâ manè reserandâ,* tubo *parùm breviore, compresso, recurvo, subpiloso:* germ. *oblongum, triquetro-compressum, sericeo-tomentosum;* pappus *brevissimus paleaceus villosus laciniato-fissilis acuminatus æqualis:* stig. 2, *glabra, filiformia, subexserta, flava:* discus *planiusculus, flavus, tubis radii pauld altior;* flosc. *hermaphr. glabri, subpellucentes, exteriores peripheriam versùs recurvati;* tubo *tereti;* fauce *subampliore, oblongâ, cylindricâ, marginato-5-gonâ;* limbi *laciniis brevibus ovato-acuminatis:* antheræ *flavæ,* filamentis *elasticis:* germ. *oblongum, cultrato-compressum ab acie interiore villosâ;* pappus *radii similis nisi quod sæpè inflosculis centralioribus lacinularum una interior in setam longiorem producatur:* stig. 2 *furcato-recurva, linearia, glabra, flava.* Recept. *planiusculum angustum:* paleæ *lanceolato-cuspidatæ, flosculis disci parùm breviores, scariosæ, naviculares, singulæ flosculum singulum complectentes, carinâ denticulato-pubescente.*

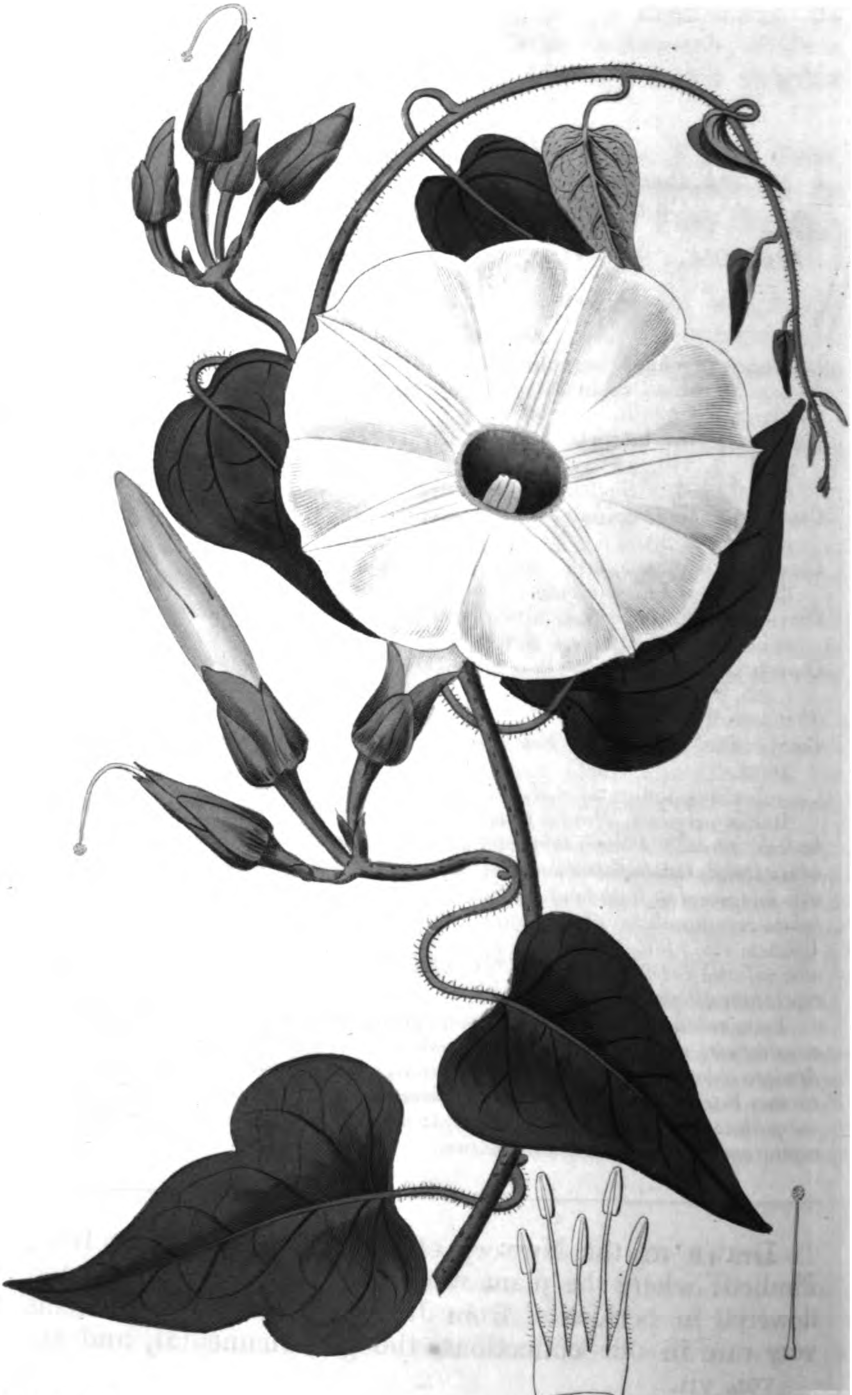
Till now only known by the above short phrase in "Sertum Anglicanum," where it has been entered by L'Hé-

ritier, the founder of the genus, from a native sample in the Banksian Herbarium. We have not retained the synonym quoted by Willdenow, from Thunberg's Prodromus, the leaves in that being described as bare or smooth, while in this they are furnished with both a downy and a strigilose pubescence.

Introduced by Messrs. Colvill, of the King's Road, Chelsea, with whom it flowered last September in the greenhouse, having been grown from seed from the Cape of Good Hope.

The genus includes 19 published species, of which only one besides the present is noticed as being in our gardens; and that belongs to a different section. They are all from South Africa.

A small weak, slender, branching *shrub;* branches leafy all the way, and tomentosely grey in the young wood. *Leaves* acerose, rigid, sessile, ascending, scattered, rather wide-set, linearly subulate, about ⅓ of an inch long, entire, on the outside convex fluted slightly tomentose roughened by short hard inclined bristles and green, on the inside concave and tomentosely whitened, point spinous brown. *Flowers* yellow, terminal, sessile, solitary, enveloped below by the leaves of the branches, more than an inch in diameter. *Calyx* oblong, turbinate or narrowing downwards, light-yellowish brown, much higher than the disk of the flower, closely imbricated below and chequered by small downy white compartments, radiately extended above and quite smooth: *leaflets* very unequal, inner ones spatulately ligulate with a lanceolate lamina (blade) rather broader than the unguis (claw). *Radius* of the *corolla* numerous, *florets* pistilbearing, closish, lamina obversely ligulate unindented 2-plaited, reddish down the middle of the back, convolutely folded when the ray converges at sunset.



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IPOMŒA pandurata; *α*.

Potato-Vine.

PENTANDRIA *MONOGYNIA.*

Nat. ord. CONVOLVULI. *Jussieu gen.* 132. *Div. I.* Stylus unicus. CONVOLVULACEÆ. *Brown prod.* 1. 481. *Sect. I.* Germen unicum.

IPOMŒA. *Suprà vol.* 1. *fol.* 9.

Div. Caulis volubilis.

I. *pandurata,* foliis cordatis integris panduriformibus; calycibus lævibus. *Lin. sp. pl. ed.* 2. 1. 219; (*sub* CONVOLVULO).

(*α*) stigmate capitato.

Convolvulus panduratus. *Lin. loc. cit.* *Willd. sp. pl.* 1. 850. *Hort. Kew. ed.* 2. 1. 329. *Pursh amer. sept.* 1. 144. *Nuttall gen.* 1. 123. *Elliot sket.* 1. 254. *Barton med. bot.* 1. 250. *t.* 23. *Curtis's magaz.* 1939.

Convolvulus foliis cordatis integris panduriformibus, calycis lævibus. *Gron. virg. ed.* 2. 28.

Convolvulus foliis inferioribus cordatis, superioribus trilobis, calycibus pedunculis petiolisque glabris caule cærulescente. *Fl. virg.* 141.

Convolvulus flore maximo albo, tubo intùs purpureo, foliis panduriformibus et nonnullis cordatis. *Clayt. n.* 641.

Convolvulus megalorhizos flore amplo lacteo; fundo purpureo. *Dill. elth.* 101. *t.* 85. *fig.* 99.

(*β*) stigmatibus brevibus.

Convolvulus candicans. *Solander in schedis banksianis.* *Curtis's magaz.* 1603.

Convolvulus panduratus. *Michaux bor. amer.* 1. 138.

Radix *perennis, elongata, cylindrica.* Caulis *herbaceus, volubilis, pubescens, teres.* Folia *(subsecunda) longè petiolata, lato-cordata s. lobata lobis rotundatis obsoletioribus, integra, acuminata,* petiolo 2-*unciali.* Pedunculi *lactescentes folio longiores teretes:* flores *fasciculati.* Cor. *magna, tubulato-campanulata (hypocrateriformis) alba, fundo rubro-purpurascente.* Bracteæ *vix ullæ, sed sæpiùs squamæ* 2 *obsoletæ.* Stam. *longitudine tubi alba infernè laxiùs lanata.* Pist. *album, longitudine vix staminum;* stig. *capitatum album.* Barton loc. cit.

Folia *subtùs pilosiuscula:* petioli *villosi.* Pedunculi 1-5-*flori;* pedicelli *crassiusculi, stricti.* *Foliola* 2 *extima* calycis *opposita plurimùm breviora firmiora oblonga obtusa extùs subplicato-striata.* Germ. *viride conicum* disco *carnoso luteo orbiculato elevato subimmersum,* biloc.? 4-*spermum?* Stam. *inæqualia:* anth. *lineares albæ receptaculo dorsali fusco.* Stigma *parvum, capitatum, apice bilobo-emarginatum.*

Drawn at the Nursery of Mr. Dennis, Queen's Row, Pimlico; where the plant was cultivated in the stove, and flowered in perfection from July to September. It seems very rare in our collections, though ornamental, and ac-

cording to Dr. Barton found very generally in sandy places from Canada to Florida; receiving in its course various local appellations, such as: Wild-Rhubarb, Wild-Potato, Hog-Potato, Wild-Potato-Vine, Mécoacanna, Kussader or Kassader, &c. &c.

We have subjoined *candicans* as a variety, not from an assurance of the specific identity of the two plants, but for the sake of assorting the synonymy, which has, we suspect, been confused by Michaux and Pursh. Their stigmas differ materially; though the plants agree in a general habit ditinguishable in the genus by some striking peculiarities.

" The root is perennial, very large, cylindrical, and " full of longitudinal fissures. It is generally about the " thickness of a man's wrist, and about two or three feet " long, branched at the bottom, of a yellow ochre colour. " I have seen specimens of greater dimensions. The stem is " twining, often procumbent on the earth, not unfrequently " climbing round fence-posts. It is round and of a greenish " purple colour. The leaves are broad-heartshaped, entire, " lobed, panduriform, somewhat acuminate, deep green " above and lighter underneath, situated on long petioles. " Flowers in panicles; calyx smooth awnless, corolla tubularly campanulate, white, with purplish red at the base, " both within and without. The peduncles and petioles " have a common origin, and are arranged in pairs. The " flower-buds are of a purplish red hue at first, and when " further advanced, of a straw-colour. Flowers from June " to August." *Barton l. c.*

The medicinal virtues, which reside in the root, do not appear to be either important or well-ascertained, but as far as they have been proved, are deemed analogous to those of Jalap. Mr. Elliot speaks of the root as being of a bitterish taste, slightly astringent and containing some resin.

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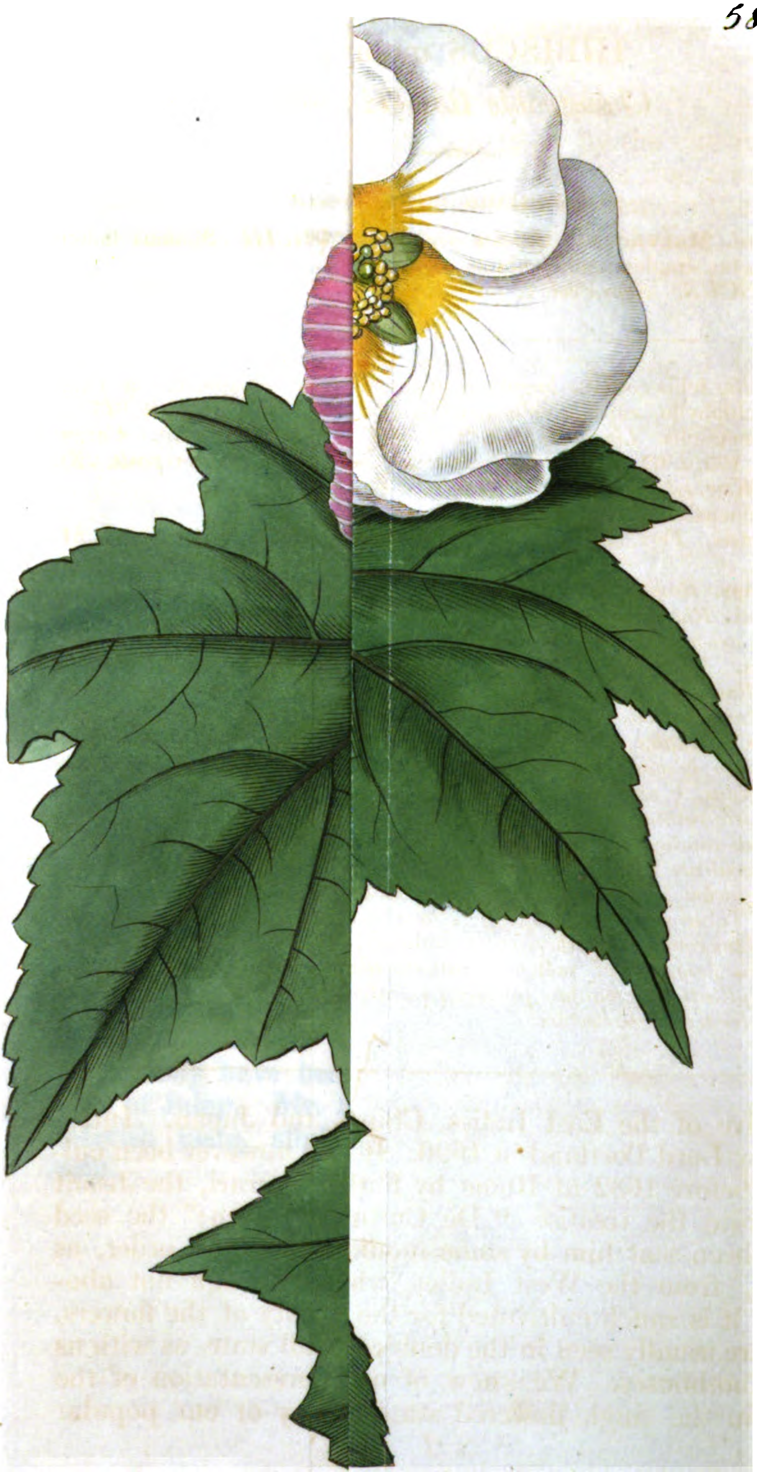

Syd. Edwards. del.

J. Watts. sc.

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HIBISCUS mutabilis.

Changeable Rose-Hibiscus.

MONADELPHIA *POLYANDRIA.*

Nat. ord. **Malvaceæ.** ***Jussieu gen.* 271.** ***Div. III.*** **Stamina** indefinita. Fructus simplex multilocularis.

HIBISCUS. ***Suprà vol.* 1. *fol.* 29.**

H. ***mutabilis***, foliis cordatis angulatis quinquelobis acuminatis, calyce exteriore octophyllo, capsula villosa, caule arboreo. ***Willd. sp. pl.*** 3. 817.
Hibiscus mutabilis. ***Lin. sp. pl. ed.*** 2. 2. 977. ***Thunb. jap.*** 272. ***Cavan. diss.*** 3. 165. ***t.*** 62. ***fig.*** 1. ***Loureiro cochin.*** 419. ***Andrews's reposit.*** 228. ***Hort. Kew. ed.*** 2. 4. 226.
Hibiscus sinensis. ***Mill. dict. ed.*** 8. ***n.*** 2.
Rosa sinensis. ***Ferr. de cult. flor.*** 479. ***tabb.*** 485-499. ***Mer. surinam.*** 31. ***tab.*** 31.
Flos horarius. ***Rumph. amb.*** 4. 27. ***tab.*** 9.
Hina-pareti. ***Rheede malab.*** 6. 69. ***tabb.*** 38-42.

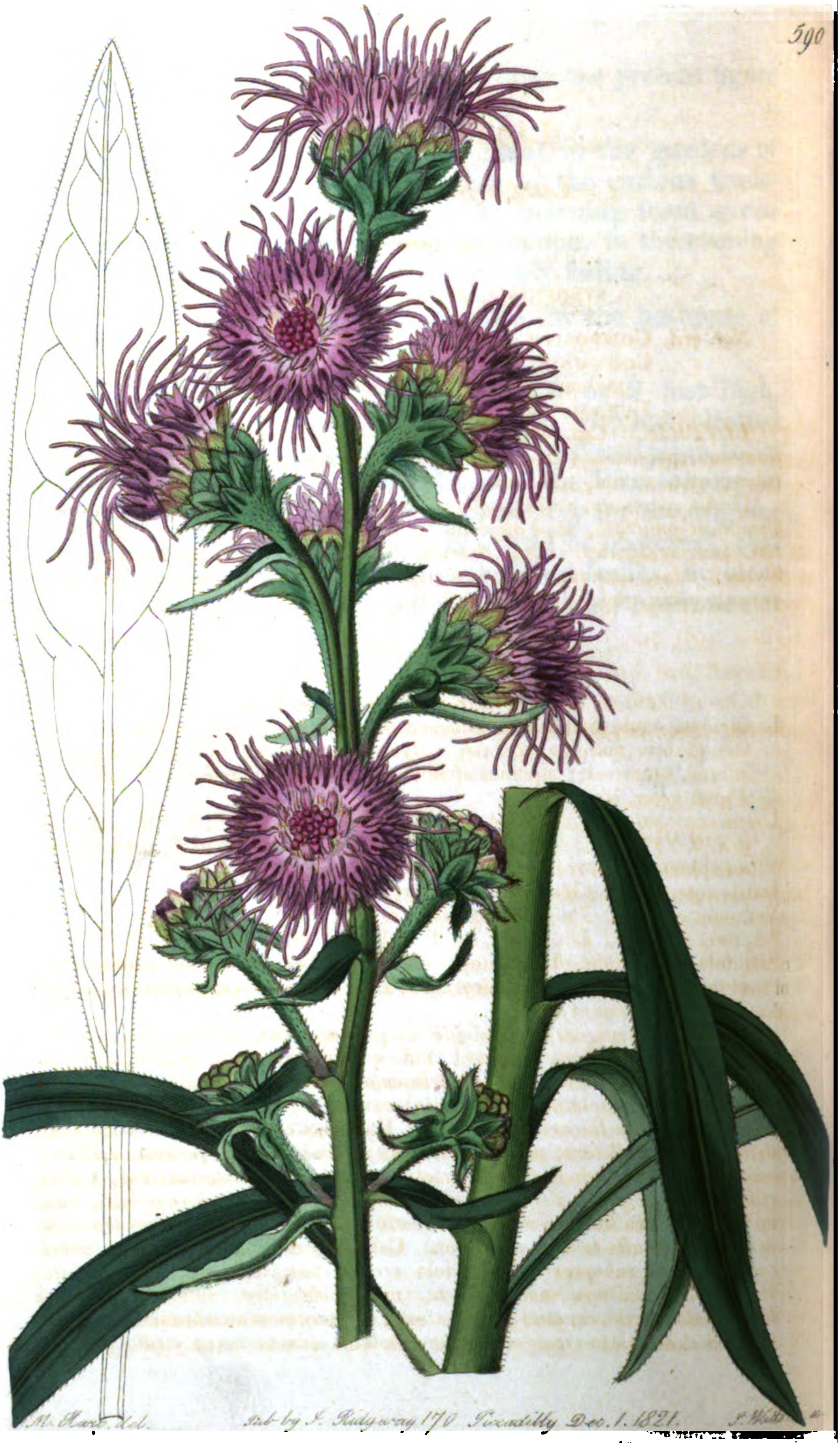
Frutex *arboreus villoso-canescens ramosus, ramis cuticulâ tomentosâ cinerascentibus.* Fol. *tomentosa, dentata 7-9-nervia, 7-9-angulata:* stipulæ 2 *erectæ, lineari-attenuatæ.* Flores *magni, subquini, in summis ramis axillares, solitarii, erecti, corymbosi,* pedunculis *petiolo longioribus, teretibus, strictis.* Cal. *duplex, herbaceus, mollis, pubescens:* exterior 8-*phyllus, interiore dimidio brevior, foliolis lineari-attenuatis,* 2 *majoribus oppositis:* interior 5-*fidus,* ¼ *unciæ altus, nervoso-striatus, segmentis ovato-acuminatis.* Cor. *contorto-rotata diametro triunciali v. majore, æqualis, extùs villosa, manè viridi-candicans, meridiè dilutè erubescens, vesperè saturatè purpurascens, occidente sole marcescens:* petala *cuneato-obovata, nervosa, sesquiuncialia, parùm longiora quàm lata, basi intùs villoso-barbata; laminâ subrotundâ.* Tubus stamineus *triplo ferè brevior corollâ, lutescens, umbonato-conicus, totus confertìm antheriferus;* antheræ *pallidè sulphureæ filis incumbentes ipsis longioribus;* pollen *è granulis globulosis grumosum.* Styli 5 *exserti, replicati,* stigmatibus *pruinosis pileato-capitati:* germen *ellipticum, viride, apice sericeo-barbatum.*

Native of the East Indies, China, and Japan. Introduced by Lord Portland in 1690. It had however been cultivated before 1632 at Rome by Father Ferrari, the Jesuit who wrote the treatise "De Culturâ Florum;" the seed having been sent him by some monks of his own order, as he says, from the West Indies, where, though not aboriginal, it is much cultivated for the beauty of the flowers, which are usually seen in the double or full state, as with us in our hothouses. We know of no representation of the species in the single-flowered state in any of our popular works, and have been induced to publish the present figure for that reason.

On the first appearance of the plant in the gardens of Europe, it attracted much attention by the curious transitions of a corolla, opening in the morning from green to white, about noon beginning to redden, in the evening deepening to a full crimson, then quickly fading.

Drawn last November three years, in the hothouse of Mr. Vere, at Kensington Gore.

An arboreous shrub, with a stem 8 or 9 feet high, and 2 or 3 inches in diameter. Ferrari, who has allotted several fine engravings and many pages of description to its illustration, likens the leaves to those of the Vine for size, to the Fig-tree for hue and surface, to the Ivy for the angular incisure of the circumference. It should be observed, that when he says the seeds came from the West Indies, he mentions its appellation as being Fuyo, which is its vernacular one in its native Japan.



M. Hart. del. Pub. by J. Ridgway 170 Piccadilly Dec. 1. 1821. J. Watts sc.

LIATRIS scariosa.

Large-flowered Liatris.

SYNGENESIA *POLYGAMIA ÆQUALIS.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. I.* Receptaculum nudum. Semen papposum. Flores flosculosi.
EUPATOREÆ. *Cassini in journ. de phys.* 88 *(an* 1819). 191.

LIATRIS. Cal. oblongus, imbricatus. *Recept.* nudum. *Pappus* plumosus, persistens (sæpè coloratus). *Antherarum* basis integra. *Semina* pubescentia, striata, turbinata.

Herbæ *perennes, radice tuberosâ v. fibrosâ.* Fol. *alterna, integerrima, glanduloso-punctata, sæpè angusta.* Flores *spicati, racemosi, v. subcorymbosi, purpurascentes.* Cal. *flosculis* 5-10-20-*(vel longè numerosioribus).* Stylus 2-*fidus, exsertus;* sem. *basi stipite minuto suffulta, sub10striata integumento multivalvi.* Nuttall gen. 2. 131; (ex angl. vers.)

Div. Spicatæ s. racemosæ; bulbosæ.

L. *scariosa*, caule simplici subpubescente, foliis lanceolatis utrinque attenuatis glabris margine scabris, calycibus racemosis alternis distantibus infernè squarrosis; squamis spathulatis, margine membranaceo-coloratis. *Pursh amer. sept.* 2. 509.

Liatris scariosa. *Willd. sp. pl.* 3. 1635. *Hort. Kew. ed.* 2. 4. 503. *Nuttall gen.* 2. 132. *(L.* scariosa. *Curtis's magaz.* 1709, *quoad figuram saltèm, ad* sphæroideam *rectiùs referenda).*

Liatris squarrulosa. *Michaux bor. amer.* 2. 92.

Vernonia scariosa. *Poir. in Lamarck encyc.* 8. 502.

Serratula scariosa. *Lin. sp. pl. ed.* 2. 2. 1147. *Mill. dict. ed.* 8. *n.* 5.

Serratula foliis lanceolatis integerrimis, calycibus squarrosis pedunculatis obtusis lateralibus. *Gron. virg. ed.* 2. 116; *(affirmante exemplari archetypo Herb. Claytoniani).*

Caulis *robustus, strictus, viridis v. purpurascens, villosus, simplex, obsoletè sulcatus, undique foliosus.* Fol. *sparsa lanceolata, gradatìm decrescentia patentia puncticulata, glabriuscula, margine brevè ciliata, firmula;* radicalia *longè petiolata,* 6-9-*uncialia:* caulina *sessilia, distantia, subdecurrentia, lanceolato-linearia, numerosa.* Racemus *caulem continuo-terminans, strictus, sparsè distans, multiflorus, nunc infernè divisus;* pedunc. *axillares, solitarii, robusti, adscendentes, stricti, cum calyce clavato-continui,* 1-*flori, villosi, supernè juxta florem foliolis subulatis crebriùs rariùsve consiti, nunc aphylli.* Flores *lilacino-rubentes, erectiusculi, nunc unciam diametro excedentes, terminalis cæteris submajor.* Cal. *herbaceus, campanulatus, imbricatus, infernè subsquarrosus;* foliola *erecta, numerosa, glabra, punctata, ciliata,* ima *oblonga subacuminata,* media *obtusiora,* summa *spathulata laminâ subrotundâ, expanso flore, patente, ad marginem membranaceâ saturatè coloratâ denticulato-erosâ obsoletiùs ciliolatâ: cuncta nervo medio foliorum*

ad instar percursa. Flosc. *glabri, æquales, numerosi, infra limbum decolores, subdiaphani, micantes, clavato-infundibuliformes, periphæriam versùs recurvati,* limbo *patente bis breviore fauce cum tubo simul sumptâ, laciniis oblongis attenuatis obtusiusculis.* Antheræ *castaneo-fuscæ, valvulis* 5 *minimis obtusulis concoloribus apiculatæ, basi obsoletè emarginatæ:* fil. *inelastica.* Stigmata *palparum instar exserta, longissima, lilacina, filiformia, glabra, intùs canaliculata, deorsùm subattenuata et de infra medium usque ad basin sulco latiore planiusculo candicante puniceo-marginato exarata;* stylus *brevior, albus.* Germ. *cuneato-cylindricum, sesquibrevius pappo, hirsutum, sulcato-striatum, pallens, stipite brevi capillaceo insidens:* pappus *plumosus, serie simplici plurimus, coloratus, fauci flosculi æqualis.* Recept. *planiusculum, glabrum, punctatum.*

A reference to the original sample in the Claytonian Herbarium, proves our plant to belong to the *scariosa* of Gronovius and Linnæus; else the epithet "squarrosus" applied by the latter to the calyx would have left some uncertainty. We still however suspect that "squarrosus" has been used inadvertently for "scariosus;" though in strictness neither term is correct, for it is the bottom only of the calyx that is slightly squarrose, and the top only that is partially scariose; but it is an epithet applied by Pluknet to that plant of his work, which has been deemed by Linnæus specifically identical with *scariosa,* and which must have suggested to him the name.

We omit in our synonymy the L. *scariosa* of Curtis's Magazine (No. 1709) believing it (as to the figure at least) to be the *L. sphæroidea* of Michaux, in which the edges of the leaves are smooth, the spike much longer, more numerously flowered and shorter peduncled, the calyx nearly globular, tenderer, and of a lighter green, with far broader colourlessly and scariosely bordered connivent interior leaflets. The description, however, which is said to have been taken from a different plant from that from which the drawing was made, may probably relate to the present species.

The synonym adduced to *scariosa* by Linnæus from Pluknet, we believe to belong to *sphæroidea.* The two seem to have been also confused in the Banksian and Lambertian Herbariums.

Drawn last October from a plant in the collection of Mr. Burchell, at Fulham. We also saw several others in the Nursery of Messrs. Colvill, at Chelsea.

It is a hardy perennial with a stout stem from 2 to 3 feet high, rising from a large tuberous root, and flowering freely from September to November in the open ground.

Cultivated by Miller in 1739.

" LIATRIS is a genus wholly North American, the
" tuberous-rooted species of which rank amongst the nu-
" merous, real or pretended, remedies administered for
" the bite of the Rattle-snake. To the taste and smell
" the roots appear impregnated with turpentine, and the
" plants are for this reason called *Pinettes de Prairie* by the
" Canadian boatmen." *Nuttall l. c.*

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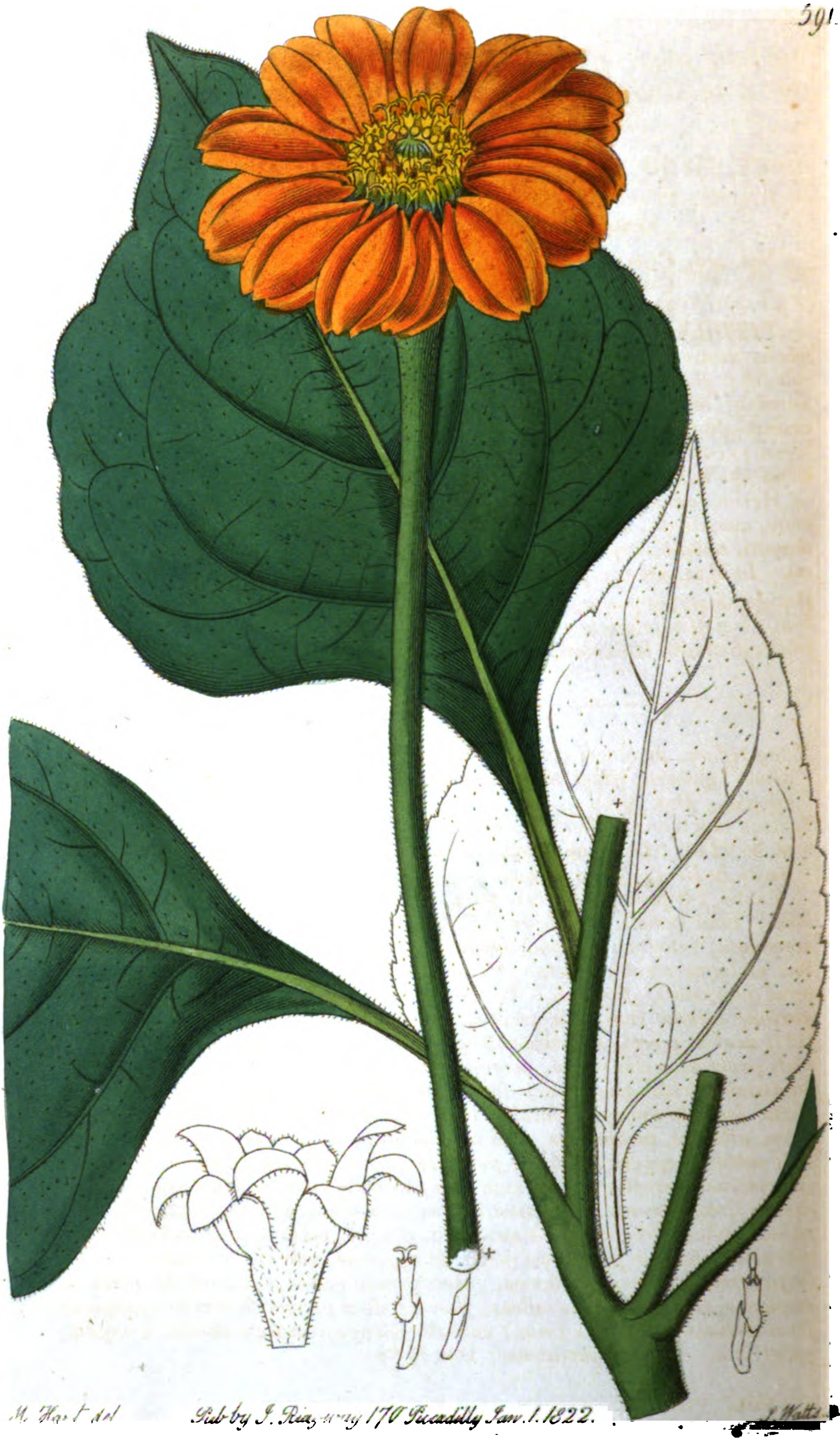

M. Hart del.

Pub by J. Ridgway 170 Piccadilly Jan. 1. 1822.

J. Watts

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TITHONIA tagetiflora.

Saffron-coloured Tithonia.

SYNGENESIA *POLYGAMIA FRUSTRANEA.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. VII.*
Heliantheæ. *Cassini in journ. de phys.* 98 *(an* 1819). 191.

TITHONIA. *Involucr. (cal.)* globosum, gemino ordine polyphyllum, foliolis ovatis acuminatis subæqualibus suprà patentibus. *Flos* numerosus radiatus: *flosc. radii* neutri, plurimi, ovali-oblongi, nervoso-striati; *disci* hermaphr. basi ventricosi. *Recept.* convexum, paleaceum. *Achenia (sem.)* cuneato-oblonga, subcompresso-5-gona, glabra *v.* pilosa: *pappus* paleaceus, brevis persistens, paleis 5-7 inæqualibus lacero-truncatis, 2 oppositis longioribus (in T. *tubæformi* subulato-cuspidatis).

Herbæ *annuæ, robustæ, facie* Helianthi. Fol. *alterna, petiolata, ovata, acuminata, serrata, nunc lobata, petiolum versùs cuneata.* Pedunculi *elongati, aphylli, suprà clavato-incrassati, fistulosi.* Radius *croceus vel flavus.* *In* Heliantho *proximo* involucr. *multiseriatum squarrosum,* recept. *planiusculum,* pappus *bipaleaceus caducus sæpiùs cuspidatus.* *In* Galardiâ flosc. disci *glanduloso-tomentosi,* radii 3-*partiti,* pappus *polyphyllo-paleaceus foliolis distinctis lanceolatis integris setâ longâ terminatis.* Don MSS.

T. tagetiflora, involucri (calycis) foliolis ovato-lanceolatis, acheniis (seminibus) glabris, pappi foliolis omnibus laceris, foliis integris trilobisve, asperis. *Don MSS.*

Tithonia tagetiflora. *Desfontaines in ann. du mus.* 1. 49. *t.* 4. *Willd. sp. pl.* 3. 2246. *Lamarck illustr. t.* 708. *Poiret in Lamarck encyc.* 7. 690. *Smith in Rees's cyclop. in loco.*

Caulis 1-3-*pedalis, erectus, teres, molli-pubescens, alternè ramosus, foliosus:* rami *remoti, simplices.* Fol. *longè petiolata, ovata v. subcordata, acuminata, integra v.* 3-*loba, crenata, reticulato-nervosa nervis* 3 *principibus: utrinque viridia, hirta.* Pedunculi *elongati, uniflori, lanuginosi, supernè incrassati, fistulosi.* Involucr. *foliaceum, villosum, foliolis integerrimis infernè coarctatis erectis, supernè laxis patentibus.* Flosc. radii (12?) *neutri, crocei, elliptico-oblongi, intùs lanugine densâ minutâ vix sensibili pruinosi, extùs villosi, nervoso-striati, apice subdentati,* tubulo *hirsuto brevissimo viridi compresso;* flosc. disci *pubescentes, limbo flavo hirsuto erecto, laciniis oblongis acutulis, tubo pallescente basi ventricosâ hirsutiore.* Germ. *albicans, turbinatum, pilis raris deflexis:* pappus *tenuis albus, è paleis latis subbinis oppositis glabris fissilibus laceris pluriès brevioribus flosculo (flosculorum centraliorum lacinula una palearum nunc in setam villosam producitur):* stig. *exserta, flavissima, lineari-acuminata, revoluto-replicata, extùs villosa;* stylus *albus, basi bulbosus.* Fil. *elastica, villosa:* anth. *pullo-flavoque alternè striatæ cum pube brevi pellucidâ appressâ, valvulis* 5 *flavis erectis oblongis terminatæ:* pollen *flavum.* Receptaculi paleæ *lanceolato-naviculares, cuspidatæ, carinatæ, dorso villosæ, flosculis disci plurimùm breviores, supernè fusco-virentes.* Achenia (sem.) *cuneato-oblonga compressiuscula, 5-angula, glaberrima.* Pappus *persistens.* Don MSS.

Cultivated in the Paris Garden in 1778, from seed collected at Vera Cruz by M. Thierry. Established as a distinct genus by Professor Desfontaines in 1780.

Now first introduced into this country by the Horticultural Society, with whom it flowered in their garden at Hammersmith towards the end of last summer.

A very handsome outdoors annual, requiring to be raised in the spring upon a hotbed. The flowers have something the appearance of the French Marygold, but are of a different and much finer yellow. We suspect that the plant will not ripen seed very readily either here or in France, in which last country it has been long since lost.

We find samples of the species, gathered in Jamaica by Mr. Wiles, in the Lambertian Herbarium.

An attentive examination of the samples of HELIANTHUS *tubæformis*, in the same Herbarium, has convinced us that that species should be included in TITHONIA, with which it agrees throughout in habit and character. There is likewise an unrecorded species in the same Herbarium, brought by Mr. Cowan from the Havannah; and this, we believe, will also be found to belong to HELIOPSIS.

We had not room for any of the lower three-lobed leaves in our plate, where only the upper entire ones are shown.

The genus comes near to HELIANTHUS, but there the calyx is in many rows of leaflets and squarrose, the receptacle nearly flat, and the seedcrown of two caducous generally cuspidated paleæ. *Don MSS.*

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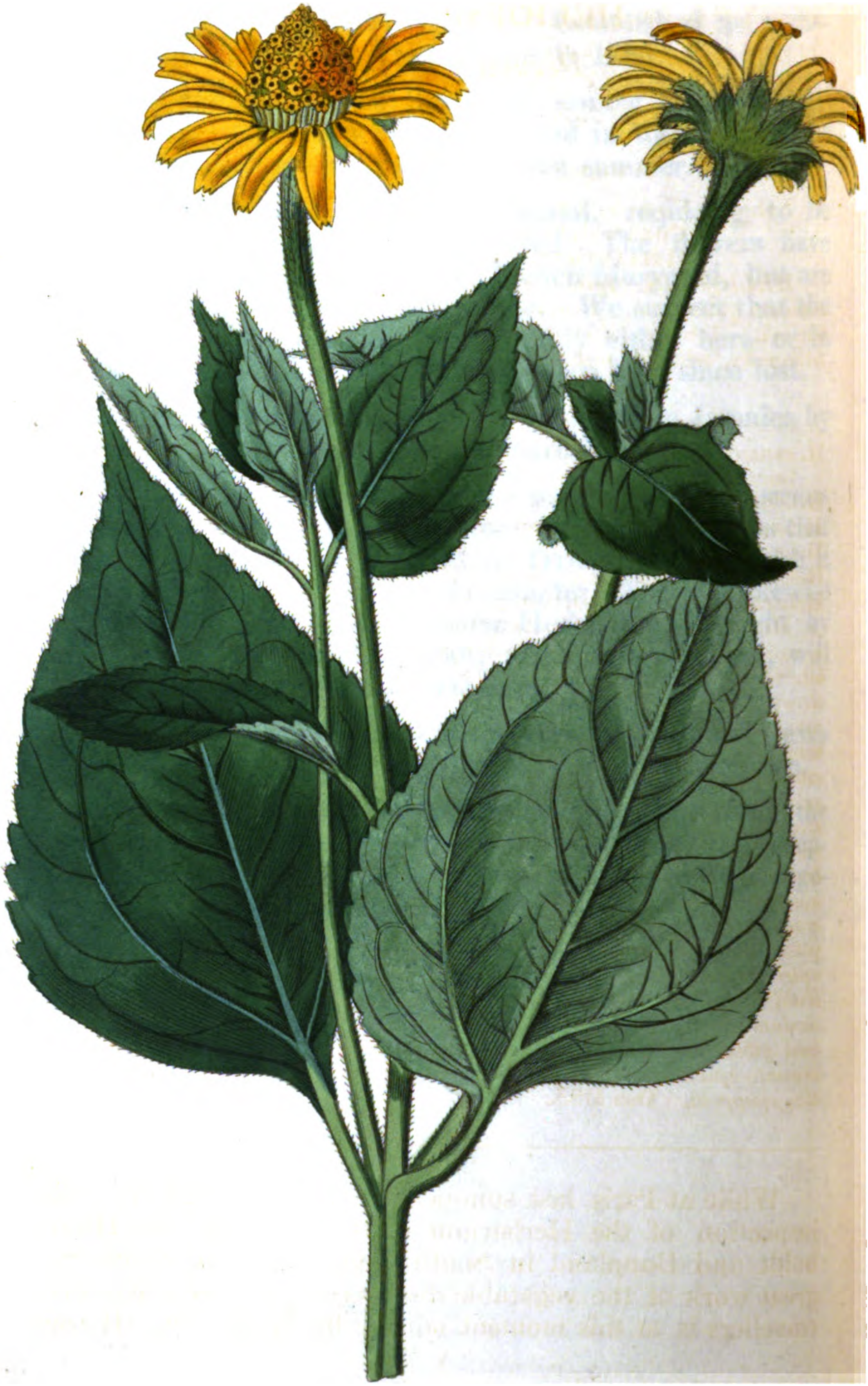

Hart. del. Pub. by J. Ridgway 170 Piccadilly Jan. 1. 1822. J. Watts sc.

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HELIOPSIS canescens.

Peruvian Heliopsis.

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.
CORYMBIFERÆ. *Jussieu gen.* 177. *Div. VI.*
HELIANTHEÆ. *Cassini in journ. de phys.* 88 (*an* 1819). 191.

HELIOPSIS. *Involucrum (calyx)* polyphyllum, imbricatum. *Recept.* conicum paleaceum. *Flosculi disci* tubulosi, hermaphroditi; *radii* ligulati, feminei. *Achenia (semina)* apice calva. *Herbæ oppositifoliæ. Flores terminales, solitarii, pedunculati, flavi.* Kunth nov. gen. et spec. 4. 212.

H. *canescens,* foliis cordato-ovatis utrinque villosis, involucro biseriato imbricato, ramis erectis bifariàm pilosis. *Don MSS.*
Heliopsis canescens. *Kunth nov. gen. et spec.* 4. 212.
Heliopsis rugosa. *Hort. berol. MSS.*
Helianthus buphthalmoides. *Hortulanis.*
Helenomoium canescens. *Herb. Willdenovii*; *(fide D. Kunth.)*
Helianthus cordatus. *Herbar. peruv. penès D. Lambert.*

Herba *facie omninò* HELIANTHI, *perennis,* radice *ramosâ.* Caules *numerosi, adscendentes, teretes, subtripedales, infernè glabri nitidi, supernè bifariàm pilosi, ramosi* ramis *oppositis, erectis, caules sæpiùs superantibus, iterum divisis.* Fol. *membranacea, petiolata, lato-ovata, acuminata, serrata, utrinque virentia, hirtiùs villosa (juniora caneseentia), reticulato-venosa, 2-3-pollicaria v. ultrà latitudine sesqui-bipollicari, basi subcordato-rotunda, rariùs petiolum versùs cuneata:* petiolus *ter brevior laminâ v. ultrà, subtùs glaber, suprà hirto-canescens canaliculatus.* Pedunculi *terminales, erecti, cylindrici, subsulcati, 5-fariàm pilosi, canescentes, juxta florem clavati fistulosi; primarii ramis lateralibus breviores hisque abortientibus axillarium æmuli.* Flores *aurei, magnitudine* INULÆ britannicæ. Invol. (cal.) *biseriatum, villoso-canescens, foliolis spathulato-lanceolatis, trinerviis, mucronulatis, intimis plurimùm minoribus.* Recept. *conicum, paleaceum:* paleæ *lineari-oblongæ, obtusæ, carinatæ, flosculos sigillatìm complectentes, apice flavæ.* Flosc. disci *hermaphr., tubulosi, glabri, deorsùm attenuati, limbi laciniis brevissimis acutis revolutis:* radii *femin., lineari-oblongi,* 3-*dentato-retusi.* Anth. *inclusa, nigra.* Germen *breve, angulatum:* stylus *basi gibbosus:* stigmata *exserta, recurvatìm replicata, linearia, villosa, incrassato-apiculata.* Achenia (semina) *subovata 5-angula, papilloso-micantia, epapposa.* Don MSS.

While at Paris last summer, we were gratified with the inspection of the Herbarium collected by Messrs. Humboldt and Bonpland in South America, from which the great work of the vegetable discoveries of those celebrated travellers is at this moment editing by M. Kunth. It was there that we ascertained our plant to be of the species we have placed it in. The synonyms we have added which are not in the "*Nova Genera et Species Plantarum*," were obligingly communicated by M. Kunth, who intends to introduce them in a Synopsis or Appendix that is to conclude his work.

The species was originally taken up from a very dilapidated sample, and its description has consequently failed in the requisite exactness. *Canescens* would not have been selected for the specific denomination, had the plant been known to M. Kunth in the fresh state, no grayness being then perceptible. The nascent leaves are indeed slightly hoary.

Introduced by Mr. Anderson from the Berlin garden. Flowered in September last in the Physic Garden at Chelsea; where the drawing was taken. Apparently quite hardy. Perennial and not annual, as presumed by M. Kunth.

Observed by Messrs. Humboldt and Bonpland near Loxa, in Quito, growing at the height of 1050 fathoms above the level of the sea, in a temperate region. There is also a sample in the Lambertian Herbarium, collected by Messrs. Ruiz and Pavon in their Peruvian expedition.

HELIOPSIS was established by M. Persoon from H. *lævis* of North America, the only other recorded species that we are aware of. The character has however been recast by M. Kunth as follows: "*Calyx* many-leaved, imbricate. *Receptacle* conical, paleaceous (chaffy). *Florets of the disk* tubular, bearing both stamens and pistil; *of the ray* ligulate, bearing only the pistil. *Seeds* without pappus. The species are herbaceous plants with opposite leaves, and terminal solitary peduncled deep yellow corollæ." *Don MSS.*

We have to thank Mr. Don for this valuable article.

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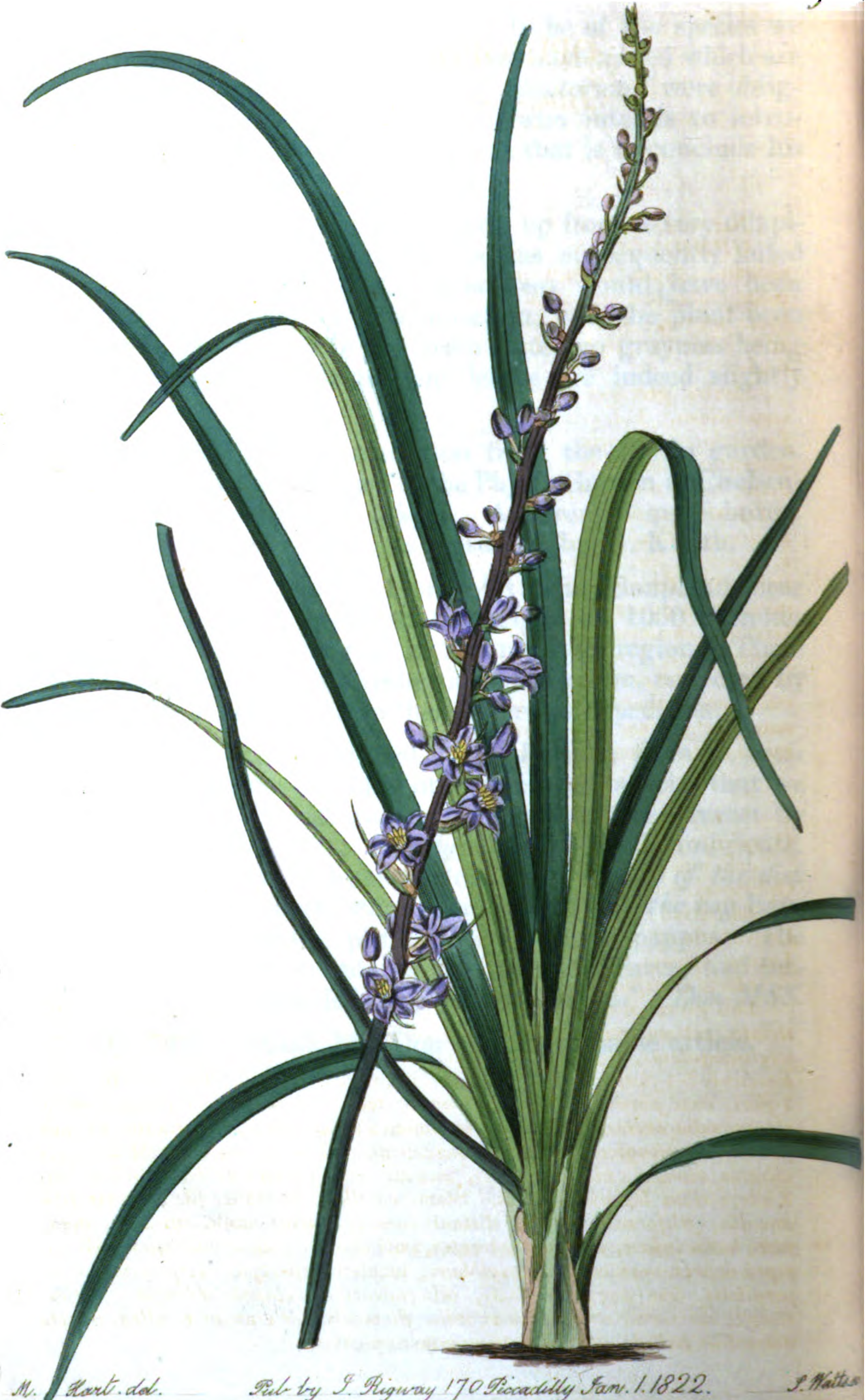

M. Hart. del. Pub by J. Rigway 170 Piccadilly Jan. 1. 1822. J. Watts

OPHIOPOGON spicatus.

Blue-flowered Snakesbeard.

HEXANDRIA *MONOGYNIA.*

Nat. ord. ASPHODELEÆ. *Brown prod.* 1. 274.

OPHIOPOGON. *Cor.* semisupera limbo 6-partito rotato æquali persistente. *Stam.* inclusa, æqualia, conniventia, *filamentis* brevibus imo corollæ limbo insertis: *anth.* introrsæ, erectæ, sagittato-lineares, extùs prope basin insertæ. *Germ.* semiïnferum, 3-loc. loculis di-poly (6) spermis, *ovulis* adscendentibus: *stylus* robustus, triquetro-subulatus; *stig.* apex trigonus continuus.

Herbæ *perennes humiliores,* radice *repente, fibris carnosis sæpiùs tuberoso-nodosis.* Fol. *graminea, radicalia, sempervirentia? numerosa, linearia, fasciculato-ambientia, infernè semivaginosè compacta incrassato-rigentia ochreataque vel membranâ tenui sphacelatâ utrinque aucta.* Racemus *laxus,* scapi *simplicis rigidi flexuosi tereti-angulosi continuus.* Flores *firmi v. rigentes, ex albidis obsoletiùs conspicuiùsve cærulescentes, minusculi, cum pedicello articulati, aggregati, rarò solitarii:* fasciculi *pauci-pluriflori, plures v. numerosi, laxiùs sparsi, singuli* bracteâ communi *subfoliaceâ subtensi* partialibusque *tenuibus sphacelatis interstincti.* Staminum *situs præ immerso germine epigynum comparens:* anth. *ex brevitate filamentorum subsessiles.* Germinis *loculamenta in* spicato *parallelo-disperma, in* japonico *(ex Richard) hexasperma.* Fructus *in* japonico *(ex dicto aut.)* bacca *cærulea subgloboso-ovoidea apice areolata,* 3-*loc.* seminibus *paucis v. interdùm solitariis; in* spicato *verè (monente D. Brown)* semen *(sæpè 2-3) nudum baccatum de* ovulo *mox post factum conceptum auctû præcociori cætera illidente exque germinis vertice erumpente excretum: basi cum exuto germine cohærens.*

O. *spicatus,* scapo foliis subæquali v. longiore, fasciculorum racemo laxiusculo numeroso longo, germinis loculamentis dispermis.

Ophiopogon spicatus. *Nobis in Curtis's magaz.* 1063: *in lineâ penultimâ folii versi.*

Convallaria spicata. *Thunb. jap.* 141. *Willd. sp. pl.* 2. 161.

Liriope spicata. *Loureiro cochin.* 200; *(monente D. Brown ab autopsiâ edocto exemplaris archetypi in Herb. Parisiano asservati.)*

Fol. *plurima, inæqualia, longiora nunc pedalia, latitudine subbilineari, striata, extima brevia dura vaginas radicales æmulantia.* Scapus *aphyllus, tereti-angulosus, rigidus, violaceo-virescens, crassitudine vix pennæ corvinæ.* Fasciculi 2-4-*flori:* pedicelli *rarò solitarii parùm longiores flore, stricti erecti,* 1-*flori, cum flore articulati:* bracteæ partiales *squamæ breves fuscæ oblongæ obtusæ subsquarroso-imbricatæ;* communes *subherbaceæ, acuminatæ, ex imis fasciculo sublongioribus sursùm decrescentes.* Flores *diametro subtrilineares dilutiùs violacei, nitidi, inodori, laciniis oblongis obtusis basi pallentibus,* 3 *interioribus latioribus ovatis.* Stam. *corollâ ⅓ breviora:* fil. *antheris ferè æqualia, filiformia, firma, distanti-incurvescentia:* anth. *luteæ, à dorso juxta basin infixæ, erecto-conniventes, indè demisso polline vibratiles.* Germ. *suprà depresso-orbiculatum trigibbum;* loculamentis *repletè dispermis,* ovulis *parallelis, imo angulo annexis, adscendentibus, obovato-oblongis.* Stylus *obsoletè violaceus, staminibus æqualis, filamentis ter crassior v. ultrà, puncto stigmatoso pallido glanduloso triangulari apiculatus.*

A genus proposed some years ago by ourselves in Curtis's Magazine (1063) under the present name, and afterwards (as a comparison of dates will show) by M. Richard by that of **Fluggea**, changed by M. Desvaux, at a still later period, into **Slateria**. Neither of these botanists appears, however, to have been aware that the present species should have been included in his genus; but has relied upon *japonicus* alone for the character.

The synonym from the "Flora Cochinchinensis" was kindly communicated by Mr. Brown, who has ascertained it from the original sample in the Herbarium of the Museum of Natural History at Paris; where a portion of Loureiro's Botanical Collection had found its way from Lisbon during the pillage of the late wars. The same attentive observer has likewise been enabled to trace the true nature of the fruit in native samples.

In O. *japonicus* the fruit has been described as a blue berry of an ovoid subglobular form, 3-celled, with few or sometimes solitary seeds, and particularized by Richard as having a tabulated remnant at the top. In *spicatus*, the one before us, Mr. Brown has found the fruit to be of the kind he has ascribed to **Peliosanthes** *Teta*, in the twelfth volume of the Linnæan Transactions. "In this monocotyledonous plant," we quote his text, "the germen coheres with the tube of the perianthium or corolla, and "has originally 3 cells, each containing 2 ovula. Soon "after the pollen has been shed, from one to three of these "ovula rapidly increase in size, by their pressure prevent "the development of the others, and rupture the germen, "which remains but little enlarged at the base of the fruit, "consisting of from one to three berrylike seeds." Now, as it is impossible to separate the two species generically, the general coincidence, both in character and habit, being obviously paramount to any particular difference in the fruit, we must either conclude that there is some mistake in the description of that of *japonicus* and that a berried seed has been taken for a berried capsule, or else that the difference between these two kinds of fruit is of little influence in regard to the modification of the rest of the plant, and possibly not even constant.

Native of Nepal, Cochinchina, China, and Japan. Introduced last year by the Horticultural Society. Flowered in their conservatory at Hammersmith in October. The fruit, in the native samples we have seen, appears (when dry at least) of a dark violet blue.

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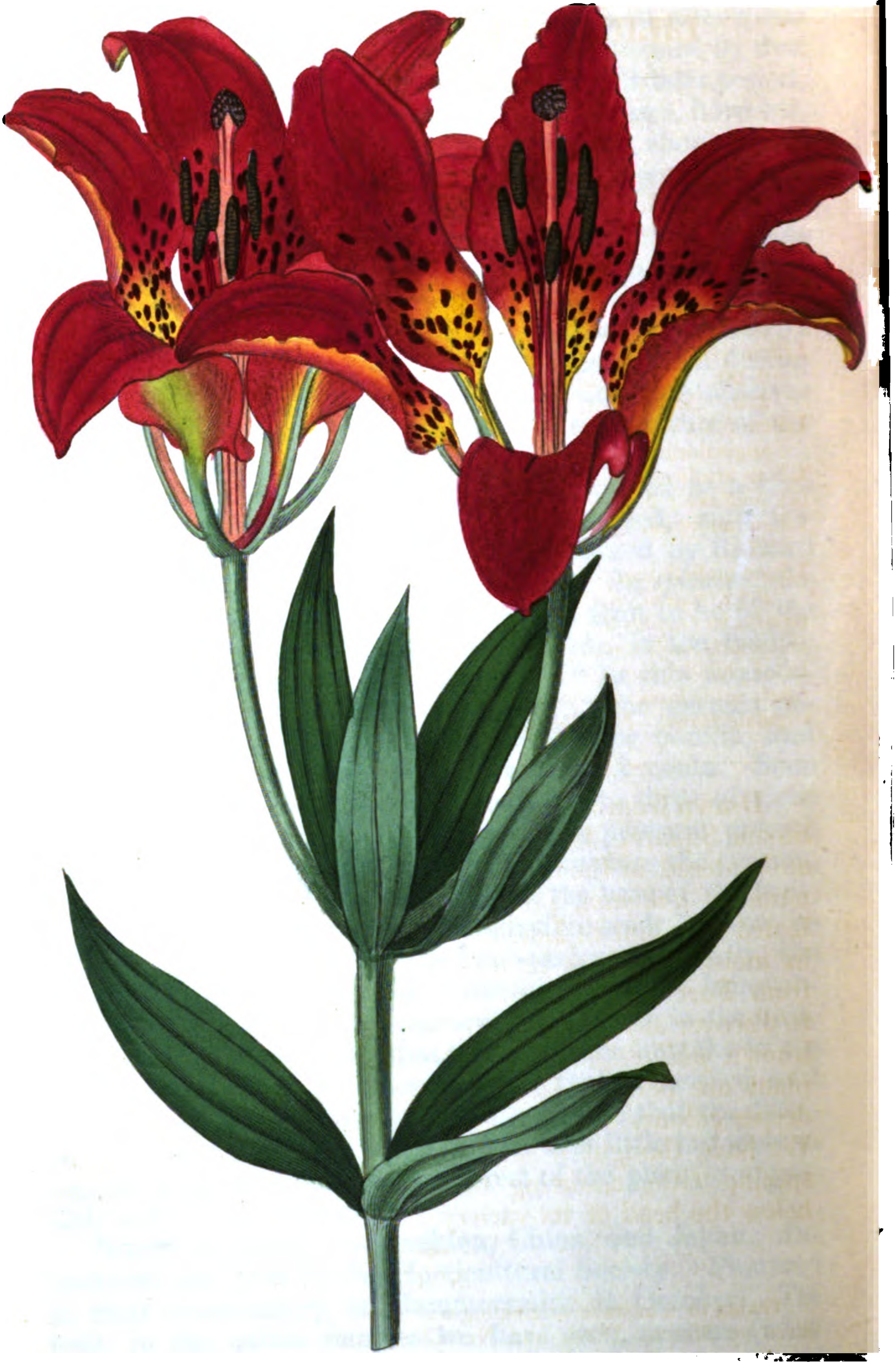

Syd. Edwards del. Pub by J. Ridgway 170 Piccadilly Jan. 1. 1822. J. Watts sc.

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LILIUM philadelphicum, β; *andinum.*

Louisiana Red-Lily.

HEXANDRIA *MONOGYNIA.*

Nat. ord. LILIA. *Jussieu gen.* 48.
LILACEÆ. *Brown MSS.*

L. *philadelphicum,* foliis verticillatis floribus erectis, corolla campanulata: petalis unguiculatis. *Lin. sp. pl. ed.* 2. 1. 435.
Lilium philadelphicum. *Hort. Kew.* 1. 431. *ed.* 2. 2. 243. *Willd. sp. pl.* 2. 90. *Curtis's magaz.* 519. *Redouté liliac.* 104. *Pursh amer. sept.* 1. 229. *Nuttall gen.* 222. *Bigelow flor. bost.* 82. *Elliot sket.* 1. 387.
Lilium foliis verticillatis brevibus, corollis campanulatis, unguibus petalorum angustioribus, floribus erectis. *Mill. ic. t.* 165. *fig.* 1.
Lilium acadiense pumilum flore rubro punctato. *Dodart mem.* 91.
(β) *andinum;* floribus sæpè 5.
Lilium andinum. *Nuttall in Fraser's catalogue (A. D.* 1813); *et in gen.* 1. 221.
Lilium umbellatum. *Pursh amer. sept.* 1. 229. (*excl. Parad. Lond.* 47.)

Folia *sparsa, sublineari-oblonga acuta, floralia verticillata:* flores 1-5 *terminales (sæpiùs* 5) *erecti pedunculis glabris:* corolla *campanulata petalis lanceolatis unguiculatis maculatis alternè angustioribus: magnitudine ferè* LILII philadelphici *speciei proximè affinis, saturatè coccinea, infrà maculis fuscis vagis laxiùs sparsa, unguibus elongato-angustis, alternis canaliculatis;* stigmate *furvo.* Nuttall loc. cit. (ex anglico vers.)

Drawn from a plant in the Nursery of Messrs. Fraser in Sloane Square. It was brought over by one of the partners, and entered in the annual Catalogue of the Nursery by the name of *andinum,* proposed by Mr. Nuttall, who had collected the plant in Louisiana, where it is said to be common in moist situations in valleys and at the sides of rivulets from Fort Mandan to the mountains. We are unable to discover any available distinction between it and the well-known *philadelphicum.* The flowers of the Louisianian plant are perhaps larger, generally more numerous, of a deeper colour, and the leaves rather shorter and broader. We have thought it safer to keep the two under the same specific title, assorting to each its particular synonymy below the head of its variety.

NOTE.

Owing to a mistake originating with Catesby, a species of this genus is given by Messrs. Pursh and Nuttall to America, while in fact it does not belong to that quarter of the globe. LILIUM *angustifolium flore rubro singulari* of the Natural History of Carolina was described and figured from a plant in Mr. Peter Collinson's garden at Peckham, and being conceived in the recollection of Catesby to be the same with one he had seen in America, was published by him in the above History as such. A sample of that plant from the same garden is also preserved in the Banksian Herbarium. Many years after, it was published by ourselves in Curtis's Magazine (No. 872), under the title of L. *pensylvanicum*, upon this authority; but having subsequently detected the mistake, we corrected it in No. 1210 (over-leaf) of the same work; where we republished the species by the name of L. *dauricum*, having ascertained its Siberian origin from native samples in the Lambertian Herbarium. This emendation however having been overlooked in the works of Messrs. Pursh and Nuttall, as well as in the Hortus Kewensis, it may not be useless to restate the whole correction. The species Catesby mistook it for was probably LILIUM *Catesbæi*, if not *philadelphicum*.

LILIUM dauricum.

Siberian Lily.

Lilium dauricum. *Nobis in Curtis's magaz.* 1210 *fol. vers.*
Lilium pensylvanicum. *Nobis in Curtis's magaz.* 872. *Pursh amer. sept.* 1. 229. *Nuttall gen.* 221; *(undique malè pro americano habitum.)*
Lilium bulbiferum. γ. *Hort. Kew. ed.* 2. 2. 241. *Georgi beschr. des russ. reichs. v.* 4. *ps.* 3. *p.* 898.
Lilium bulbiferum; spontaneum è Dauriâ. *Herb. Pallas. penès D. Lambert.*
Lilium angustifolium flore rubro singulari. *Catesb. carol.* 3. 8. *t.* 8; *(exemplari hortensi perperàm pro americano habito desumpta.)*
Lilium II. foliis angustioribus (α) flore miniato. *Gmel. sib.* 1. 41.
Polewoja Sarona. *Ruthenicè.*

Mr. Nuttall seems to have been puzzled in adopting the plant as American; and suggests the possibility of its being a hybrid produced during culture, because of its occasionally wanting the pistil in our gardens; an effect more probably of luxuriance, as the pistil is usually perfect with us and frequently fertile. The species is, in fact, very close to *bulbiferum*, but we believe it nevertheless to be truly distinct.

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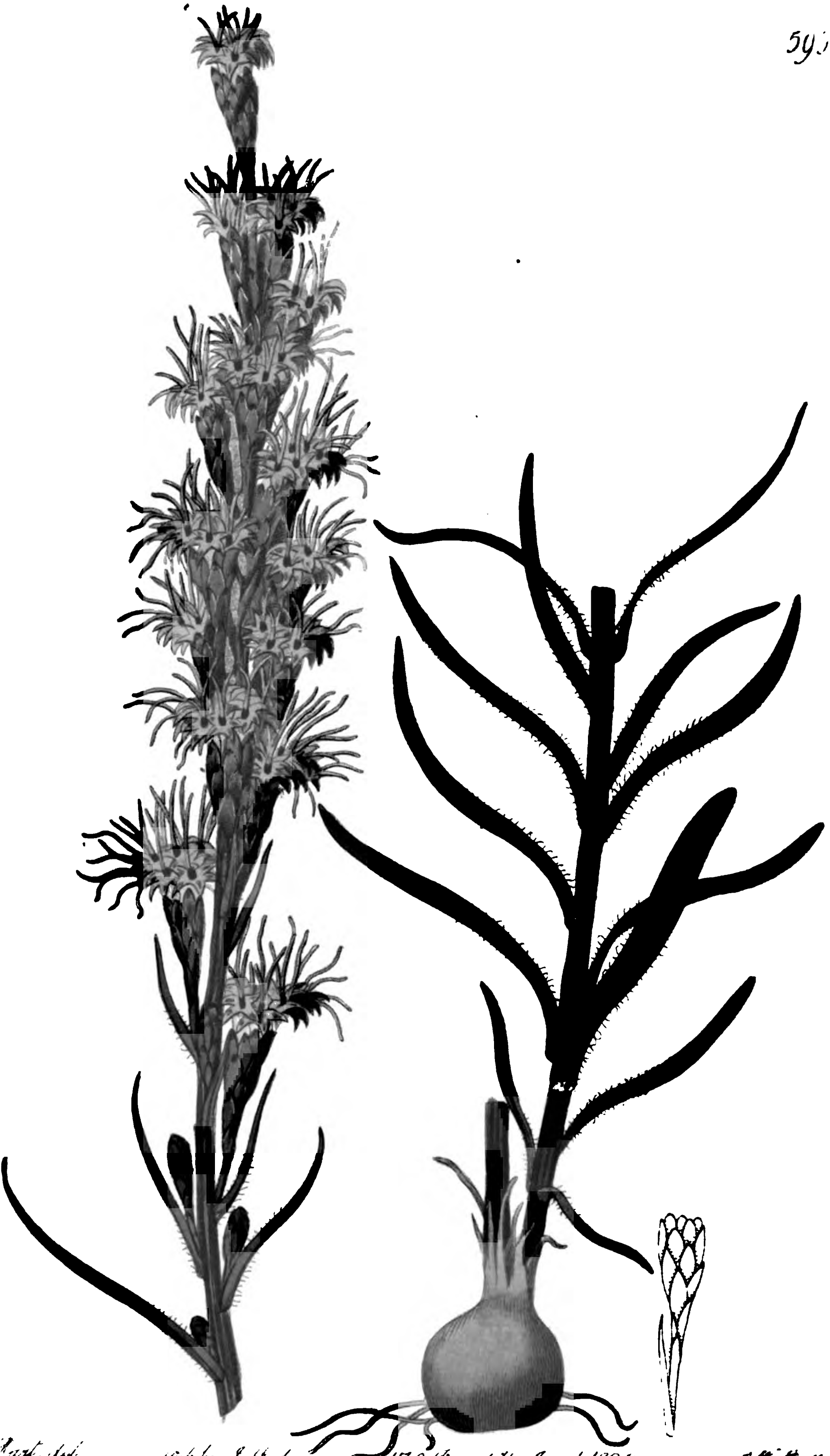


M. Hart. del. Pub. by J. Ridgway 170 Piccadilly Jan. 1. 1822. J. Watts sc.

LIATRIS pilosa.

Rattlesnake-Plant.

SYNGENESIA *POLYGAMIA ÆQUALIS.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. I.* Receptaculum nudum. Semen papposum. Flores flosculosi.
Eupatorieæ. *Cassini in journ. de phys.* 88 (*an* 1819), 191.
LIATRIS. *Suprà fol.* 590.

Div. I. Spicatæ s. racemosæ; bulbosæ.

L. *pilosa*, caule (sæpiùs) simplici pubescente, foliis linearibus pilosis ciliatis, calycibus racemosis laxiusculis: squamis lineari-oblongis obtusiusculis, pedicellis bracteolatis. *Pursh amer. sept.* 2. 508.
Liatris pilosa. *Willd. sp. pl.* 3. 1636. *Hort. Kew. ed.* 2. 4. 504. *Nuttall gen.* 2. 131.
Liatris dubia. *Barton med. bot.* 2. 222. *t.* 49.
Vernonia pilosa. *Poiret in Lamarck encyc.* 8. 503.
Serratula pilosa. *Hort. Kew.* 3. 138.
Anonymos ciliatus. *Walt. carol.* 197.
(β) *gracilis*; foliis nudiusculis, caule piloso floribus minoribus, pedunculis foliolosis. *Nuttall gen.* 2. 131.
Liatris gracilis. *Pursh amer. sept.* 508; (*docente D. Nuttall*).

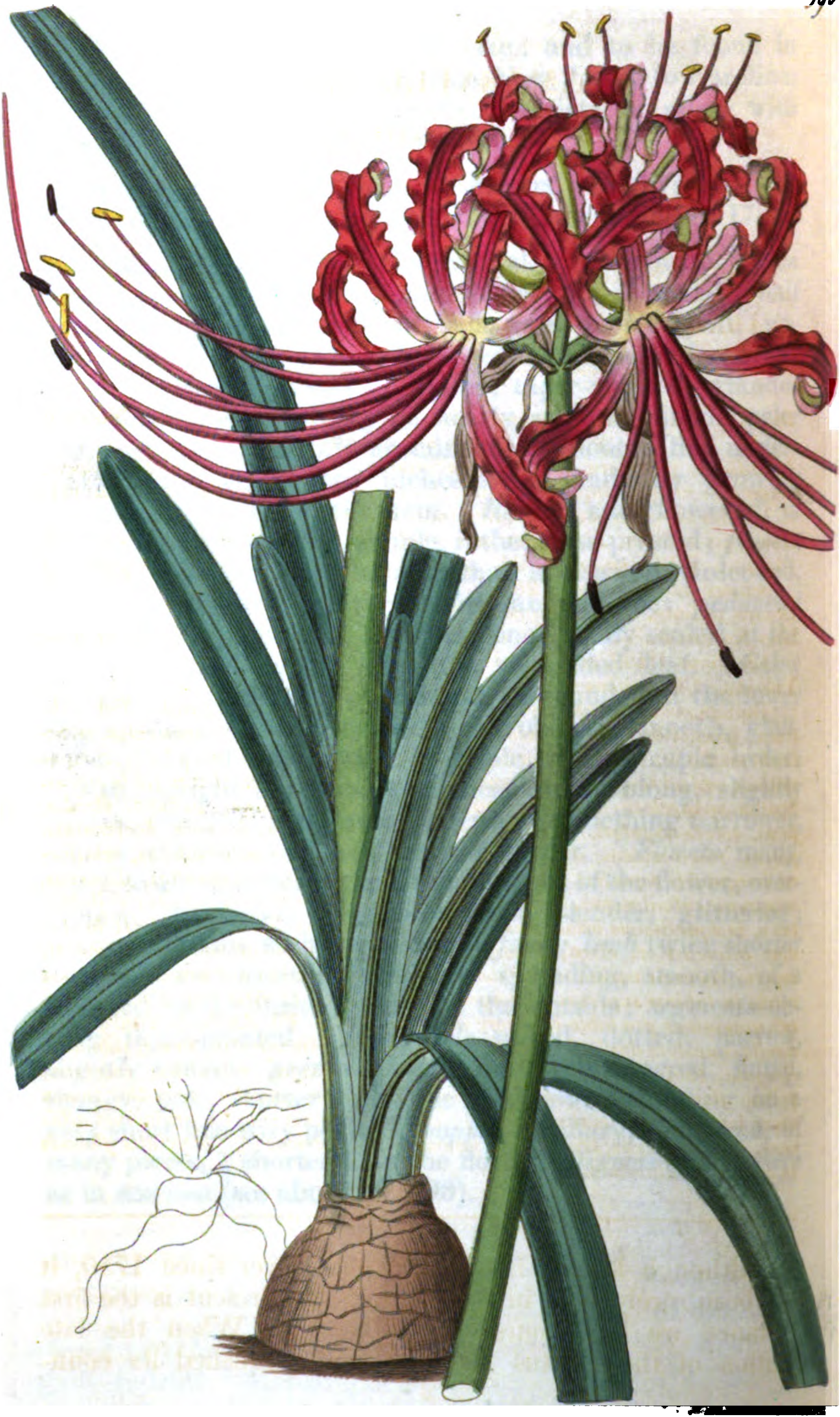
Tuber ovatum. Caulis *subsimplex, spithamæus ad sesquipedalem et ultrà crassitudine pennæ anatinæ, erectus, laxiùs densiùsve pilosus, striatus, laxè foliosus.* Fol. *caulina, sparsa, patentia, linearia, acuminata, glanduloso-punctata, pilosa v. nudiuscula nervo medio pallidiore suprà immerso infrà bilineato-prominulo; longiora biuncialia, indè decrescentia.* Racemus *foliosus, multiflorus, longitudine varius, appressiusculus, erectus, simplex, remotiusculus; floribus erectis, 3-plo* L. scariosæ *minoribus, violaceo-rubentibus, inodoris, axillaribus, solitariis, uno terminali:* pedunc. *supernè squamato-foliolosi, graciles, pilosi, striati,* 1 *ad* 2 *uncias longi v. ultra, supremi folio longiores.* Cal. *turbinato-cylindricus, infrà pedunculi foliolis appressis sua propria æmulantibus exceptus, herbaceus, oblongus, glaber, glanduloso-puncticulatus, ordine 3-4-plici imbricatus,* foliolis *cunctis erectis, lanceolato-oblongis, convexulis, ciliatis,* interioribus *longioribus subangustioribus margine colorato angustissimo.* Flosc. *plurimi, æquales, periphæriam versùs recurvati, calycem exsuperantes, elongato-infundibuliformes, angusti, puncticulis atomodeis micantibus;* tubus *cum fauce ampliori continuus;* limbus *istis simul sumptis duplo brevior, stellato-patens, glaber, intùs lilacino-rubens, extùs albicans, lac. oblongo-acuminatis.* Recept. *nudum, punctatum, angustum, convexulum:* germ. *oblongum, cuneato-attenuatum, sulcato-striatum, hirsutum, pallens, brevius pappo, stipite brevissimo capillaceo suffultum:* pappus *capillaris, plumosus, plurimus, coloratus, ⅓ brevior flosculo.* Stigmata *atque* antheræ *ut in* L. scariosâ (*suprà fol.* 590).

Native of the United States, where it is said to be known by the names of "Button Snake-Root," "Blue-Blazing-

Star," "Rattlesnake-Plant," &c. &c., and to be found in pine-barrens and sandy fields from New Jersey to Carolina. Liatris *gracilis* of Pursh seems a variety of *pilosa* with smoother foliage and smaller flowers.

Drawn in October last at Messrs. Colvill's, in the King's Road. Introduced by Mr. William Young in 1783.

A hardy tuberous-rooted perennial. *Tuber* ovate. *Stem* almost always simple, from nine inches to a foot and a half or more in height, about as thick as a duck's quill, upright, fluted, thinly or thickly haired, loosely leaved. *Stem-leaves*, scattered, spreading, linear, taper-pointed, glandularly dotted, either hairy or nearly smooth, midrib paler and sunk above, slightly prominent in a double line underneath: from about two inches long, gradually growing shorter as they ascend the stem. *Raceme* manyflowered, of various lengths, upright, simple, rather close-pressed; *flowers* upright, widishly apart, smaller than in *scariosa*, violet-red, scentless, axillary, solitary, with an end-one: *peduncles* slender, hairy, fluted, 1-2 inches long, leafily scaled at the top, uppermost longer than the subtended leaf. *Calyx* herbaceous, turbinately cylindrical, surrounded at the lower part by the leaflets of the peduncle, oblong, smooth, glandularly dotted, imbricated in triple or quadruple order; *leaflets* upright and straight, lanceolately oblong, slightly convex, fringed, *inner ones* longer and something narrower, with a coloured but very shallow border. *Florets* many, equal, bending towards the circumference of the flower, overtopping the calyx, long-funnelform, slender, glittering; *tube* continuous with the widened *faux; limb* twice shorter than the two together, stellately spreading, smooth, of a lilac-red on the inside, white on the outside; *segments* oblong taper-pointed. *Receptacle* naked, dotted, narrow, slightly convex: *germen* oblong cuneately tapered, fluted, shaggy, pale, shorter than the seedcrown, standing on a very short fine wiry pedicle: *pappus* capillary, feathered, of many pieces, ¼ shorter than the floret. *Stigmas* and *anthers* as in *scariosa* (see above fol. 590).



J. Hart. del. Pub. by J. Ridgway 170 Piccadilly Jan. 1. 1822. J. Watts. sc.

AMARYLLIS radiata.

Snow-drop-leaved Amaryllis.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Narcissi. *Jussieu gen.* 64. *Div. II.* Germen inferum.
Amaryllideæ. *Brown prod.* 1. 296. *Sect. I.*
AMARYLLIS. *Suprà vol.* 3. *fol.* 226.

Div. VI. Corollæ hexapetalo-partitæ, subrotatæ. Folia bifaria. Nobis in journ. of science and the arts. 2. 362.

A. *radiata,* pluriflora, floribus semiformibus: foliis lineari-ligulatis glaucis, corollâ crispâ, duplo genitalibus breviore, laciniis omnibus v. 5 tantùm in labium superius semicirculatìm radians approximatis.

Amaryllis radiata. *L'Héritier sert. angl.* 16. *Hort. Kew.* 1. 421. *ed.* 2. 2. 228. *Willd. sp. pl.* 2. 60. *Andrews's reposit.* 95. *Nobis in journ. of science and the arts.* 2. 364.

Lycoris radiata. *Herbert append.* 20.

Lilio-Narcissus. V. *Trew fl. imag. t.* 35; *(non Seligm. aves. t.* 35. *ut malè habuimus Willd. et Nos in locc. citt.)*

Yuk-lan. *Chinensibus; ex Roxburgh MSS. ubi tab. ined.*

Bulbus *ovatus, mole ferè ovi columbini, tunicâ pallidâ fuscâ.* Fol. *subtrina, lineari-ligulata, obtusula, in virorem obscuriorem glaucescentia, canaliculo medio lateribus planioribus glauciore, semunciam v. circà lata.* Scapus *spithamæus ad sesquipedalem, compresso-teres, erectus, simul cum foliis vigens.* Spatha *sphacelata* 4-5-*flora pedunculis pluriès longior:* pedunc. *virides, firmi, tereti-angulosi, corollâ plurièes breviores.* Cor. *inodora, horizontali-patens, roseo-micans, diametro ferè triunciali, divaricato-radians, semiformi-irregularis æqualis:* tubus *virescens, brevissimus, v. subnullus, decurvus, compresso-cylindraceus, germinis subisoperimeter:* limbus 6-*partitus unilabiatus v. inæqualissimè bilabiatus, laciniis distantibus lineari-lingulatis latitudine bilineari v. circa, subæqualibus undulatis canaliculatis mucronatis supernè recurvis carinâ mediâ dorsi virescente, omnibus aut summum medium versùs in labium superius convergentibus aut nunc ex istis unâ distantissimâ sub staminibus pro labio inferiore per se manente.* Fil. *declinato-assurgentia, corollâ concolore duplo fermè longiora, prostantèr divergentia, firma, subulato-elongata, tubi ori inserta:* anth. *parvulæ, oblongæ, vibratiles, coccineæ,* polline *flavo.* Stylus *filamentis conformis atque concolor, robustior tamen atque longior (triuncialis v. ultrà);* stigma *punctum simplex pruinosum albicans.* Germ. *virens, trigibbo-globosum,* ovulis *pluribus* (4?) *biseriatis globosis in quoque loculamento.*

Although known in our hothouses ever since 1750, it has been rarely seen in flower; and the present is the first instance we have ourselves witnessed. When the late edition of the Hortus Kewensis was published its coun-

try had not been ascertained; but it is now however known, from Dr. Roxburgh's manuscripts, to belong to China; and by a native sample in the Lambertian Herbarium to Japan. It comes very near to AMARYLLIS *undulata* of the Cape of Good Hope.

At Messrs. Colvill's nursery in the King's Road, Chelsea, where the drawing was taken, the plant had been made to flower by being kept during the first part of the summer in the hothouse and then plunged into a common hot-bed. The bulbs are apt to break down into numerous offsets, while the outer coat remains entire, so that they appear like one bulb with numerous leaves; a closer inspection however shows that they consist of several bulbs with 3 leaves to each bulb.

Leaves about 3, bifarious, linearly ligulate, channelled, about ½ an inch wide, of a dark glaucously clouded green, channel greener than the sides, obtuse. *Scape* cotemporary with the leaves, round, slightly compressed from 7 inches to a foot and a half high. *Spathe* sphacelate, 4-5-flowered, several times longer than the peduncles: *peduncles* green, firm, obsoletely angular, several times shorter than the flowers, which have no smell. *Corolla* semiform, facing the horizon, of a glittering rose-red, nearly 3 inches in diameter, divaricately radiant, equal: *tube* green, extremely short, almost none, bent downwards, cylindrical, compressed, nearly of the calibre of the germen: *limb* 6-parted, either of one upper lip or sometimes with a very disproportionate lower one, segments apart from each other, linearly ligulate, about 2 lines broad or thereabout, curled, channelled, mucronate, recurved towards the top, with a green keel along the back; all either converging towards the upper middle one into a semicircularly radiant upper lip, or else with the middle lower one remaining alone below the stamens for an under lip. *Filaments* declinedly assurgent, of the same colour as the corolla, but nearly as long again, pointing forwards and diverging, firm, subulately elongated, inserted at the mouth of the tube: *anthers* small, oblong, balancing, deep red, with yellow pollen. *Style* of the same shape and colour as the filaments, but thicker and longer (3 inches or more in length): *stigma* a simple frosted whitish point. *Germen* green, round and triply protuberant, with several (4?) globular *ovules* in two rows in each cell.

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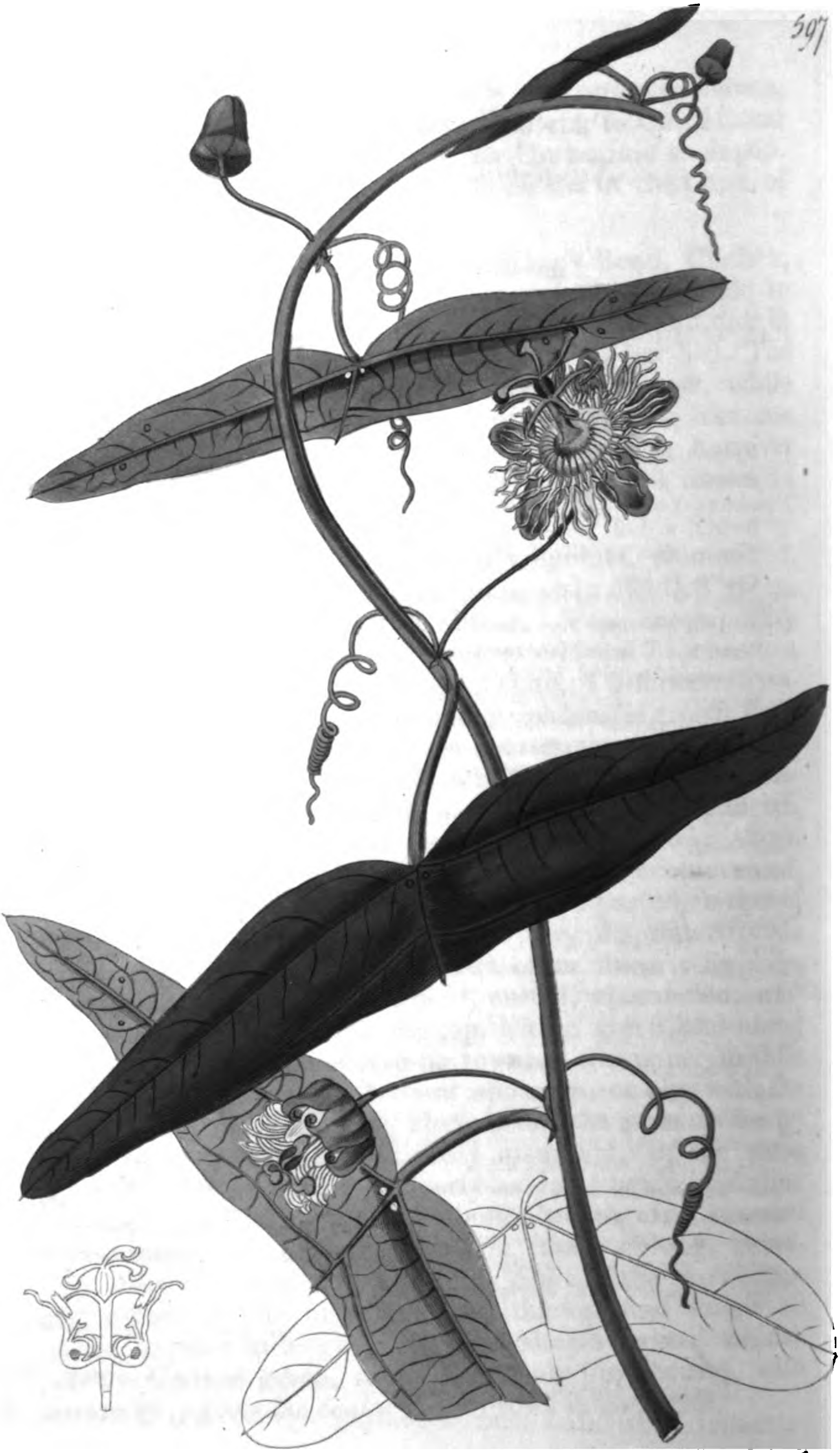


S. Edwards del.   Pub. by J. Ridgway 170 Piccadilly Jan 1. 1822.   J. Watts sc.

PASSIFLORA Vespertilio.
Night-blowing Passionflower.

MONADELPHIA *PENTANDRIA.*

Nat. ord. Passifloreæ. *Jussieu in ann. du mus.* 6. 102.
PASSIFLORA. Suprà vol. 1. *fol.* 13; *et fol.* 574 *vol. præsentis.*

Div. Foliis bilobis.

P. *Vespertilio,* foliis cuneiformibus bilobis acuminatis divaricatis basi biglandulosis, petiolis eglandulosis, involucro nullo. *Willd. sp. pl.* 3. 613.

Passiflora Vespertilio. *Linn. am. acad.* 1. 223. *n.* 11. *t.* 10. *fig.* 11; *iterùm* 8. 262. *n.* 119. *Ejusd. sp. pl. ed.* 2. 2. 1357. *Mill. dict. ed.* 8. *n.* 11. *Cavan. diss.* 10. 437. *t.* 271. *Hort. Kew. ed.* 2. 4. 150. *Smith in Rees's cyclop. in loco.*

Passiflora discolor. *Link abbild. auserl. gew. kön. bot. gärt. zu berl.* 13. *t.* 5.

Granadilla bicornis, flore candido: filamentis intortis. *Dill. elth.* 164.

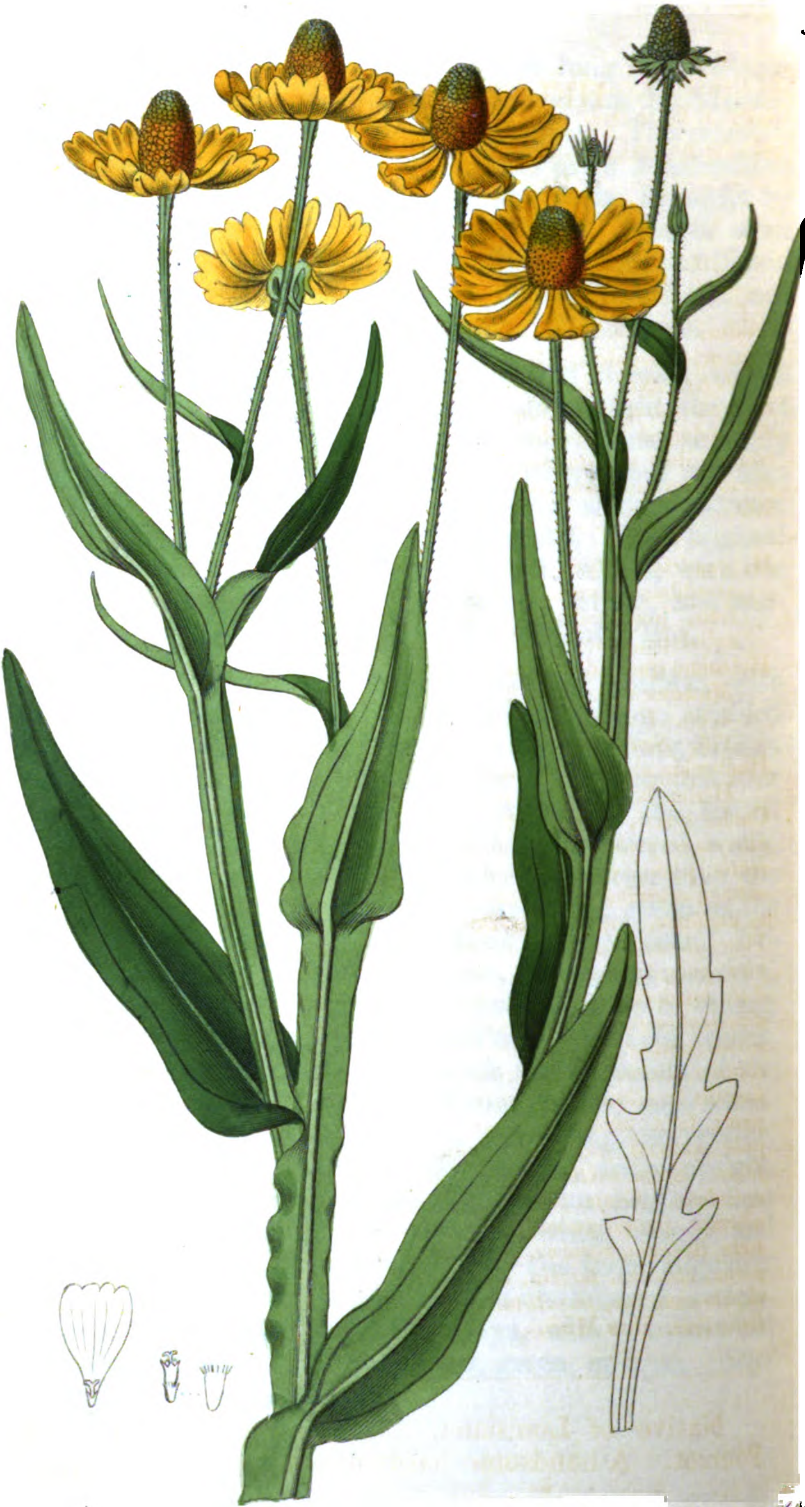
Frutex *altè scandens, ramis compresso-ancipitibus glabris foliisque obscurè virentibus.* Fol. *latissima, divaricato-biloba, cum formâ ferè arcûs tensi in transversum elongata, uncias 2-6ve lata, altitudine bis sexièsve breviora, infrà cordata convexiuscula, suprà subrectilineari-repanda vel concaviuscula, nervosa nervis principibus 3, subtùs lanugine minutâ vix sensibilitèr pubescentia ibidemque punctis ustulato-fuscis glandulam secernentem continentibus (geminis conspicuioribus intra nervos 2 laterales ad marginem baseos positis, cæteris vagis paucis) ocellata:* lobi laterales *oblongi acuminati obtusi mucronati,* medius *omnino obliteratus mucronulo tantùm superstite vel rudimentum breve rotundatum:* petiolus *semi-sesquiuncialis, filiformis, suprà obsoletè canaliculatus, flexilis:* folia juniora *subtùs sæpè plùs minùs rubedine tincta:* stipulæ *subulatæ parvulæ:* cirrhi *junctìm cum flore axillares.* Pedunc. *solitarii,* 1-*flori, breviores folio, rubicundi, plurimùm graciliores petiolo, filiformes, elastico-rigentes, ebracteati.* Involucr. 0. Flos *nocturnus, unciam diametro paulò excedens, extùs virescens, intùs albicans, involuto-emarcescens:* cal. *urceolato-rotatus,* urceolo *oblato ventricoso exsulco 3-plo breviore* segmentis *oblongo-attenuatis obtusis muticis. planis ecarinatis:* cor. *tenera, alba, limbo calycino conformis sed plurimùm minor.* Corona *radiata, alba, numerosa, biseriata,* radiis exterioribus *filiformibus, patentissimis, flexuosis, obtusis, calyci æqualibus v. sublongioribus,* interioribus *conformibus erectiusculis duplo brevioribus et ultrà rectisque apice glochidiformi:* operculum *album profundè densèque plicatum, septo brevi carnoso parietali nectarii à margine interiori fornicato-incumbens.* Nectar. *albicans septo simplici.* Columna *paulò calyce brevior,* stipite *subrubente tereti glabro longiore germine:* germ. *ovale, viride, glabrum, opacum:* styli *pallidi,* stigmate *saturatiùs viridi pileato-capitati:* fil. *ligulata, virentia, stipiti æqualia:* anth. *oblongæ, pallidæ.*

Perhaps the only plant of the species in the country, for though cultivated near a century ago by Dr. Sherard, in

the celebrated garden at Eltham, it had long since disappeared from amongst us, until procured afresh by Messrs. Colvill of the Chelsea Nursery from France. The reintroduction into Europe is due to H. S. H. Prince Maximilian of Neuwied, who had communicated the seeds, brought by himself from the Brazils, to Professor Link. Plants were raised in 1817 at the Berlin Botanic Garden, and published in the work we have quoted by the title of P. *bicolor*, not having been recognised as P. *Vespertilio* of Linnæus.

The species is remarkable for its hours of blowing, which are from about ten o'clock at night to about eight the next morning. The younger leaves have a short dense scarcely perceptible fur on the under surface, where they are also often more or less tinged with crimson; a circumstance which has suggested the name of *discolor*. The original title is derived from the form of the leaf, which, with the two glassy eyelike glands just above the petiole, had suggested to the fancy of Linnæus the likeness of a Bat.

Leaves dark green, extremely broad and shallow, with something of the outline of a bow when strung; studded with several brown irregularly scattered eyelike dots, besides the more remarkable pair on the inside of the base just over the petiole. *Branches* of the same colour as the leaves, smooth, flat, 2-edged. *Peduncles* solitary, 1-flowered, wiery, elastic, much slenderer than the petioles, shorter than the leaf, bracteless. *Flowers* without an involucre, green on the outside, white within, little more than an inch over. *Urceolus* of the *calyx* broad and ventricose, furrowless and even, three times shallower than the limb: *segments* oblong slightly tapered blunt pointless keelless. *Corolla* tender, white: *petals* of the same shape with the segments of the calyx, but considerably smaller. *Crown* white; *rays* numerous in two rows; *outer* filiform, spreading, serpentine, blunt, even with the calyx, if not longer, *inner* upright, twice shorter, straight, terminated by an acutely bent hook: *operculum (lid of the nectary)* white, deeply and closely plaited, vaulted and lapping by the inner edge over the short fleshy partition of the one-chambered *nectary*. *Column* rather shorter than the calyx, with a cylindrical reddish smooth *shaft*. *Germen* oval, green, opaque. *Stigmas* deep green. *Anthers* pale.



M. Hart. del.

Pub by J. Ridgway 170 Piccadilly Jan. 1. 1822.

HELENIUM quadridentatum.

Louisiana Helenium.

◆

SYNGENESIA *POLYGAMIA SUPERFLUA.*

Nat. ord. COMPOSITÆ. *Adanson fam.* 2. 103.

CORYMBIFERÆ. *Jussieu gen.* 177. *Div. VI.* Recept. paleaceum. Semen apice dentatum aut paleaceum. Flores in plurimis radiati, in paucis flosculosi. *Recept.* HELENII *subnudum.*

HELENIUM. Involucrum (cal.) simplex, polyphyllum, subæquale. *Receptaculum* hemisphæricum, medio nudum, margine paleaceum. *Flosculi disci* tubulosi hermaphroditi: *radii* feminei ligulati. *Achenia (sem.)* paleis compluribus membranaceis coronata. *Herbæ foliis alternis decurrentibus: floribus terminalibus corymbosis radio flavo.* Kunth nov. gen. et spec. pl. 4. 299.

H. *quadridentatum*, caule alato ramosissimo paniculato fastigiante, foliis sessilibus obtusulis superioribus lanceolatis integris, inferioribus pinnatifidis, pedunculis filiformi-elongatis, involucri (calycis) foliolis lineari-subulatis, disco brevioribus, flosculis disci 4-dentatis. *Don MSS.*

Helenium quadridentatum. *Labillard. in act. soc. hist. nat. paris.* 1. 22. *t.* 4. *Michaux bor. amer.* 2. 133. *Willd. sp. pl.* 3. 2121. *Hort. Kew. ed.* 2. 5. 85. *Pursh amer. sept.* 2. 560. *Willd. enum.* 2. 898. *Nuttall gen.* 2. 173. *Smith in Rees's cyclop. in loco.*

Rudbeckia alata. *Jacq. coll.* 5. 154. *ic. rar.* 3. *t.* 593.

Herba *lætè virens, supernè obsoletè lanuginosa:* radix *fibrosa annua.* Caules *erecti, teretes, bifariàm v. trifariàm alati, paniculato-ramosi, ramis alternis corymboso-fastigiantibus.* Fol. *alterna, tenuia, sessilia, alato-decurrentia, plana, enervia, immersè puncticulata, obtusula,* superiora *elongato-oblonga acuminata integra,* inferiora *pinnato-incisa.* Pedunculi *terminales v. axillares, solitarii 1-flori, filiformi-elongati, sulcati, obsoletè villosi.* Flores *flavicantes,* INULÆ dysentericæ *subæquales, erecti.* Invol. (cal.) *simplex polyphyllum foliolis lanceolato-linearibus scabriusculis, subduodenis disco brevioribus reflexis.* Radius *femineus flavus plurimus ad basin usque divaricato-rotatus contiguus, subtùs obsoletè lanuginosus,* flosculis (12?) *sessilibus (absque tubo) planis oblongis cuneatis 4-fidis sæpiùsve trifidis, lobulis obtusis:* discus *viridi-lutescens, hermaphr., elevato-conicus, creberrimus, flosculis brevibus clavato-infundibuliformibus;* tubus *brevissimus æquans pappum;* faux *multotiès longior cylindrica subdiaphana;* limbus *4-partitus pube externâ glandulosâ subviscidâ, laciniis ovatis pluriès brevioribus fauce.* Stam. *inclusa:* anth. *fulvescentes valvulis minutis* (4?) *ustulato-fuscis apiculatæ.* Germ. *parvum, cylindricum cuneato-oblongum hirsutiùs villosum albicans,* pappo *paleaceo è paleis 5 ovato-lanceolatis brevibus;* stigmata *exserta, linearia, recurva, crassiuscula, flava; (radii) glabra.* Achenia (sem.) *parva, obovata, teretia, densè pilosa,* pappo *paleaceo brevissimo.* Recept. *elevato-conicum, punctatum, subnudum, peripheriâ solâ paleaceum,* paleis *linearibus.* Don MSS.

Native of Louisiana. Introduced in 1790 by Abbé Pourret. A handsome hardy annual, and as we have ob-

served, far more frequent in the gardens of France, than in our own, in which it flowers about September and October; in France a month or six weeks sooner. Drawn at the Chelsea Botanic Garden.

It comes very near to HELENIUM *mexicanum* of the "Nova genera et Species Plantarum;" insomuch that we should have been inclined to deem it of the same species, but for the different conclusion of M. Kunth has come to. Among other distinctions he mentions the florets of the disk as smooth in *mexicanum*, which is clearly not the case in our plant. The point is however, we suspect, to be determined by future observation.

The florets of the ray are here generally trifid, as in *mexicanum*. In *autumnale* they are frequently 5- and 6-cleft. In fact no available difference can be established on this character, which is extremely variable in the genus. We think however that the curious cuneate form of the florets of the ray might have entered with advantage into the generic character.

The florets of the disk are 4-cleft throughout in this species, not 5-cleft as usual in the order. The whole flower when bruised has a strongly aromatic flavour.

Messrs. Pursh and Persoon have erroneously stated the species to be perennial; and the former is evidently mistaken in speaking of it as growing from three to five feet high. *Don MSS.*

The genus is, we believe, wholly North American.

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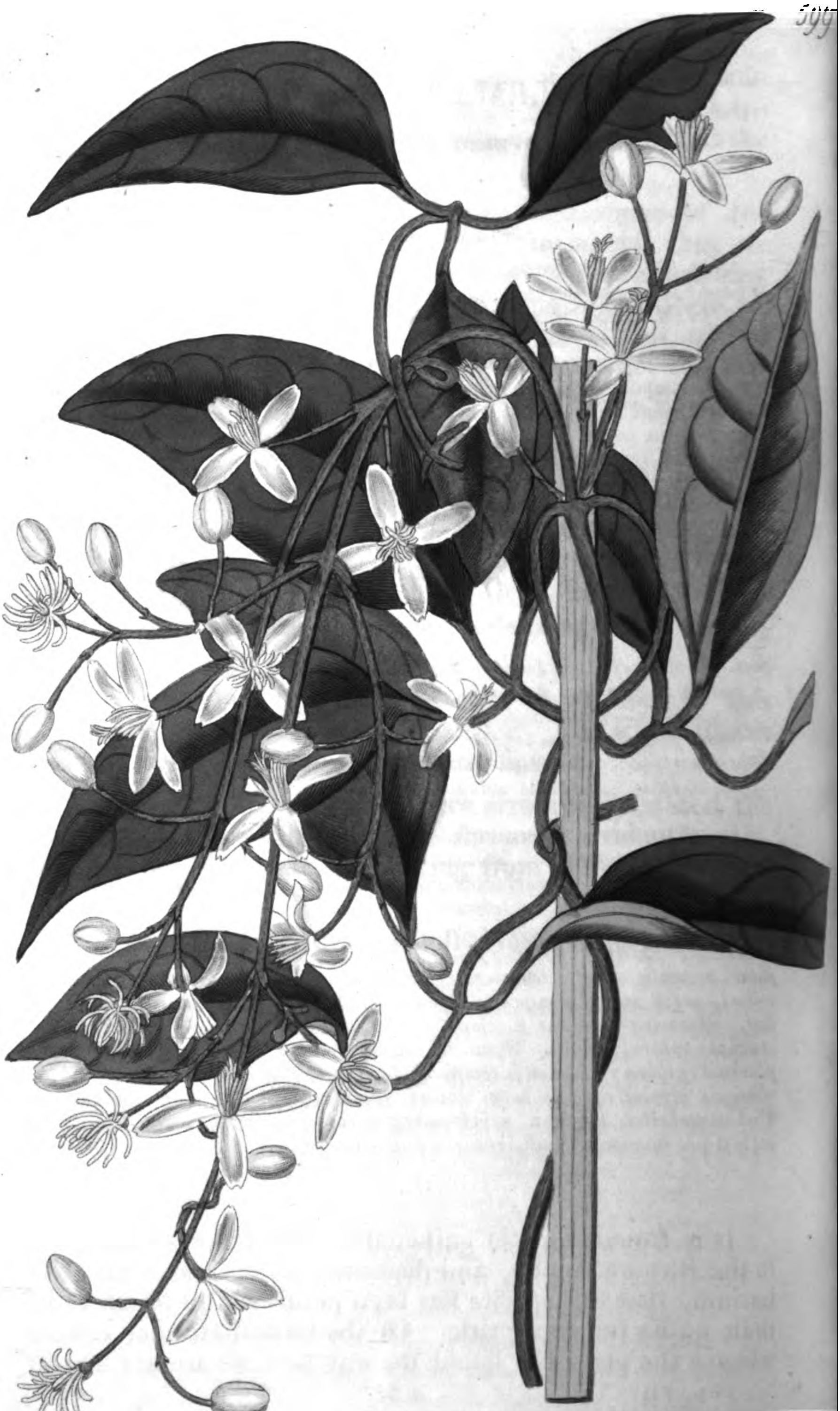


M. Hart del. Pub by J. Ridgway 170 Piccadilly Feb. 1. 1822. J. Watts

599

CLEMATIS hedysarifolia.

Birman Virgin's-Bower.

POLYANDRIA *POLYGYNIA.*

Nat. ord. RANUNCULACEÆ. *Decand. syst. nat.* 1. 127. *Div. I.* Ranunculaceæ veræ, seu *Antheris extrorsis. Tribus I.* Clematideæ.

CLEMATIS. Involucrum 0 aut calyciforme sub flore. *Sepala (petala)* 4-8 colorata, æstivatione valvata aut induplicata. *Petala* 0 aut sepalis breviora. *Cariopsides (semina)* indefinitæ stipite proprio destitutæ, in caudam sæpiùs barbato-plumosam productæ. Radices *fibrosæ perennes.* Caules *annui aut perennantes, sæpiùs sarmentosi scandentes.* Fol. *exactè opposita, in unicâ specie verticillaria, simplicia, integra lobata ternatìm pinnatìmve secta aut decomposita, petiolata*; petioli *interdùm persistentes cirrhiformes.* Pedunculi *nunc axillares nunc terminales, alii ramoso-paniculati, alii trifidi triflori, alii terni uniflori, alii solitarii* 1-*flori;* bracteolæ *secùs pedicellos nunc nullæ, nunc* 2 *oppositæ liberæ, nunc coalitæ in involucrum bilobum calyciforme.* Flores *s. potiùs calyces sæpiùs albidi, nunc flavescentes, nunc cærulescentes purpurascentesve.* Decand. l. c. 131.

Sect. I. Flammula. *Invol. sub flore* 0. *Sepala æstivatione sæpissimè valvata; Petala* 0. *Pericarpiorum caudæ longæ barbato-plumosæ; Embryonis in semine cotyledones distantes.* Subsect. II. *Floribus paniculatis, foliis ternatìm biternatìmve sectis.* Dec. l. c. 133—142.

C. *hedysarifolia,* floribus paniculatis, foliis ternatìm sectis, segmentis ovato-lanceolatis acuminatis subintegris glabris ima basi 5-nerviis. *Decand. loc. cit.* 148.

Perennis, sempervirens, scandens: rami *teretiusculi pilis mollissimis rariusculis subpubescentes.* Fol. *decussato-distantia, brachiato-patentia, ternata;* pet. comm. *purpurascens pilosiusculus, sesquiuncialis v. longior, aliquandò (in foliis floralibus?) cirrhoso-prehensilis;* folia *coriacea, viridi-cinerascentia, petiolata, ovato-oblongata, integra, acuminata, 3-nervia.* Paniculæ *terminales axillaresque, pendulæ, brachiatæ, elongato-thyrsiformes multifloræ, ramulis strictis decussato-oppositis distantibusque:* pedicelli *graciles, villosi, infra medium opposito-bigemmiferi.* Flores *candicantes, extus villosi, diametro ¾ unciæ v. circa.* Pet. 4, *ovali-oblonga, æqualia, obtusa, cruciato-rotata, caduca.* Stam. *ochroleuca, erecta, corollâ* $\frac{1}{4}$ *circà breviora, plurima, glabra; filamentis compresso-teretibus,* antheris *concoloribus lineari-oblongis erectis apiculo brevi obtuso, receptaculo vel rachide planiusculo.* Pist. *staminibus longiora, subvirentia;* germ. *pilis longis erectis capillata;* styli 3-*plo breviores, nudi, recurvo-patentes.*

It is from a sample gathered by Mr. Hore at Rangoon in the Birman empire, and deposited in the Banksian Herbarium, that this species has been published by M. De Candolle under the above title. Of the immediate source from whence the plant has found its way here we are not aware,

but should think from the botanic garden of Calcutta, now become the depository from which the plants of the most distant and sequestered quarters of India are daily transmitted to this country.

The drawing was made at the Nursery of Messrs. Colvill, in the King's Road, Chelsea; where the plant is cultivated in the hothouse and flowers about October. We do not believe that it is yet in any other collection.

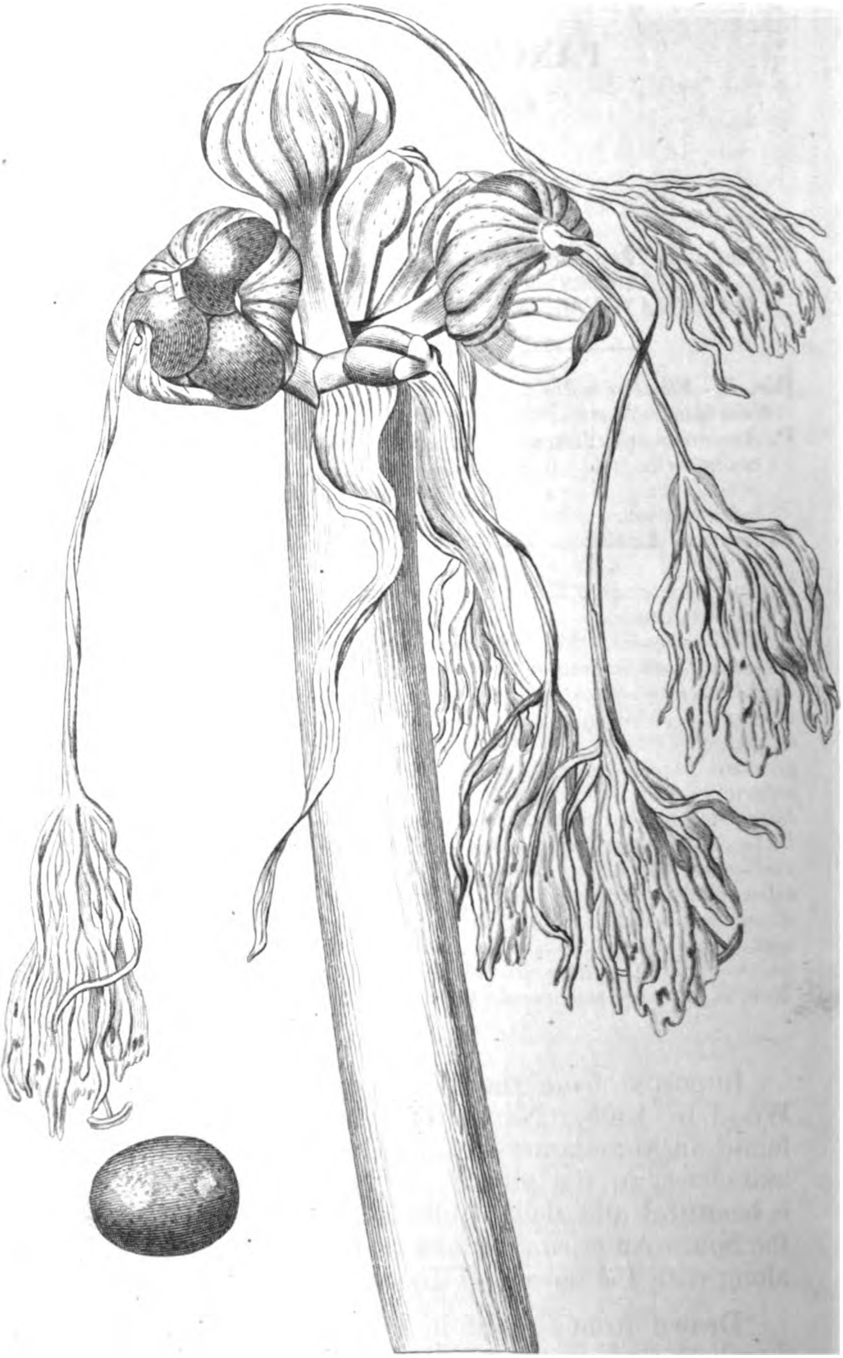
The genus CLEMATIS has been remodelled by M. De Candolle in four sections or sub-genera, under the titles *Flammula*, *Viticella*, *Cheiropsis*, and *Athragene;* comprising together 83 ascertained species, and 3 doubtful ones; by some one or other of which its type is disseminated over nearly every part of the globe.

Hedysarifolium is a suffrutescent evergreen climber: *branches* roundish, thinly sprinkled with very fine soft hairs. *Leaves* decussately opposite, with wide intervals between the pairs, outspread, ternate: *common petiole* purplish, slightly hairy, an inch and a half long or more, sometimes (especially in the leaves next the flowers) tendril-like and prehensile; *leaflets* coriaceous, cinereously green, petioled, ovately oblong, entire, taper-pointed, 3-nerved. *Panicles* terminal and axillary, pendulous, elongatedly thyrsiform, many-flowered, *branchlets* stiff, decussately opposite and wide apart: *pedicles* slender villous, bearing two small opposite abortive buds below their middle. *Flowers* white, furred on the outside, about ⅔ of an inch in diameter. *Petals* 4, ovally oblong, equal, obtuse, cruciately rotate, caducous. *Stamens* cream-coloured, upright, about ¼ shorter than the petals, many, smooth: *filaments* compressedly filiform: *anthers* of the same colour, linearly oblong, upright with a short obtuse point and a flattish receptacle. *Pistils* longer than the stamens, greenish; *germens* with long upright hair; *styles* thrice shorter than these, bare, recurved and spreading.

600.A.

608. B

600
B



ub. by J. Ridgway 170 Piccadilly Feb. 1. 1822.

J. Watts sc.

600 A. B.

PANCRATIUM Amancaes.

Golden Pancratium.

HEXANDRIA *MONOGYNIA.*

Nat. ord. Narcissi. *Jussieu gen.* 54. *Div. II.* Germen inferum.
Amaryllideæ. *Brown prod.* 1. 206. *Sect. I.*
PANCRATIUM. *Suprà vol.* 3. *fol.* 221.

Div. I. Floribus petiolatis v. subsessilibus: limbo radiato: coronâ ad dentium intervalla staminiferâ. Nob. in journ. of scien. and the arts. 3. 317.

P. *Amancaes*, pluriflorum; foliis infernè fistuloso-vaginantibus laminâ lanceolato-elongatâ, corollæ tubo erecto limbum nutantem stellatum æquante, coronâ inæqualitèr 12-fidâ, denticulatâ, subbreviore laciniis: staminibus infracto-conniventibus. *Nobis in journ. of science and the arts.* 3. 323.

Pancratium Amancaes. *Nobis in Curtis's magaz.* 1224. *Hort. Kew. ed.* 2. 2. 218.

Ismene Amancaes. *Herbert append.* 46.

Narcissus Amancaes. *Ruiz et Pavon fl. peruv.* 3. 53. *t.* 283. *fig. a.*

Bulbus *ovatus.* Fol. 3-*plura, bifaria, bipedalia magisvè latitudine subbiunciali, canaliculata, infernè fistuloso-vaginantia vaginâ longitudinalitèr dimidiato-membranaceâ.* Scapus *bi-tripedalis, compressus, anceps.* Spatha *arescens, ovato-cuspidata.* Germ. *viride, ovato-trigonum.* Flores 3-6, *aurei, odoratissimi, subsesunciales, sessiles vel nunc brevè pedunculati.* Tubus *germinis pluriès brevioris continuum, virens, carnosus, crassus, triqueter, supernè curvatus;* limbus *nutans, sexpartitus, stellatus, tubo æqualis, laciniis lineari-lanceolatis cum acumine longè attenuato, distantibus.* Corona *cum limbo concolor parùmque brevior, oblato-campanulata, crenis* 12 *alternè angustioribus (latioribus* 6 *staminiferis) incisa, maculâ viridi radiiformi infra staminis cujusque pedem picta.* Fil. *aurea, inclusa, obesiùs subulata, coronæ crenis sublongiora,* 3 *summa infracto-declinata,* 3 *ima subassurgentia:* anth. *subsagittatæ, obliquè incumbentes.* Stylus *albicans, declinatus, triquetro-filiformis, filamentis obesior:* stig. 3, *brevia.* Caps. *bulbisperma.* Nob. in journ. of science and the arts. 3. 323.

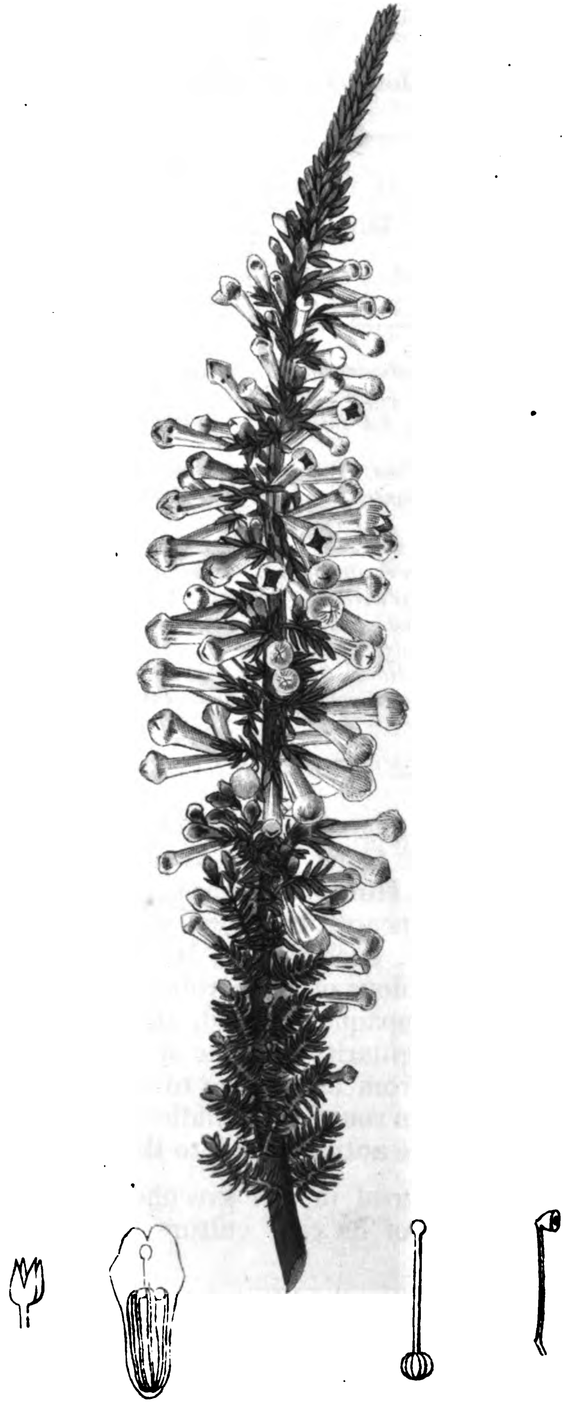
Imported from the Brazils by Messrs. Middlemist and Wood in 1808. Native of Peru, where it is said to be found in abundance on the hills called Amancaes or Hamanchaes, in the vicinity of Lima. The blossom, which is beautiful and delightfully fragrant, is said to be used by the South American females as an ornament for their hair, along with the flowers of Begonia *tuberosa.*

Drawn from a plant in Mr. Griffin's hothouse at South Lambeth; where the species is cultivated with great success, and produces flowers and seeds every year.

A supernumerary plate has been added to our fasciculus, to represent the appearance of the ripe fruit.

Bulb ovate: *leaves* 3 or more, upwards of 2 feet high, bifarious, fistularly sheathing at the lower part, the half of the sheath on the side opposite to the blade being membranaceous; blade lanceolately elongated, channelled, about 2 inches broad. *Scape* 2-3 feet high, compressed, two-edged. *Spathe* sphacelately membranous, ovately cuspidate. *Flowers* 3-6, deep yellow, about 6 inches long, sessile or sometimes shortly peduncled: *tube* upright, green, thick, fleshy, 3-cornered, continuous with a several times shorter germen, equal to the limb, curved at the top: *limb* nodding, sixparted, stellate; segments linearly lanceolate, taper-pointed, wide apart: *crown* of the same colour as the limb and but little shorter, oblately campanulate, denticulate, 12-cleft, the clefts alternately narrower, the 6 broadest bearing the stamens, marked within by a green longitudinal streak below the foot of every stamen. *Filaments* robust, roundedly subulate, short, rather higher than the clefts in which they stand, convergent below the rim of the crown: *anthers* incumbent, slanting. *Germen* green, ovately 3-cornered: *style* filiform, 3-cornered, whitish, thicker than the filaments: *stigmas* 3, very short. *Capsule* bulbispermous.

601.



Hart. del   Pub by J. Ridgway 170 Piccadilly Feb. 1. 1822.

601

ERICA colorans.

Blush-flowered Heath.

OCTANDRIA *MONOGYNIA.*

Nat. ord. Ericæ (*superiùs* Ericeæ). *Jussieu gen.* 159. *Div. I.* Germen superum.

ERICA. *Suprà vol.* 1. *fol.* 6.

Div. II. Longifloræ. *Corollæ cylindricæ vel clavatæ, semunciâ longiores.* Subdiv. A. *Antheræ aristatæ (appendicibus apicis filamenti binis, linearibus vel subulatis, margine vel integro vel serrulato).* Dryander in Hort. Kew. ed. 2. 2. 368.

E. *colorans*, foliis ciliatis, floribus axillaribus approximatis subsessilibus, corollis clavatis, antheris subexsertis subaristatis. *Link abbild. aus. gew. bot. gart. zu berl.* 1. 37. *t.* 15.

Erica colorans. *Loddiges's bot. cab.* 224. *Link enum. hort. berol.* 1. 360.

Caulis *erectus ramosus* 2 *pedes et ultrà altus.* Ramuli *pubescentes.* Folia *sena, quatuor lineas longa, subtùs carinata, ciliata.* Flores *in ramulis brevibus approximatis terminales, undè habitus spicatus.* Pedicelli *brevissimi.* Bracteæ *flori approximatæ.* Calyx *laciniis ovatis acutis subtillimè ciliatis brevibus albentibus (purpurascentibus) versùs apicem nervo viridi.* Corolla *octo lineas longa clavata alba demum rubra.* Antheræ *cum stylo subinclusæ, aristis brevissimis.* Link l. c.

This pretty shrub, though long ago introduced by Mr. Niven from the Cape of Good Hope, is not to be found in the last edition of the Hortus Kewensis. According to Mr. Sweet it comes the nearest to *perspicua* of any of the genus. The specific name, such as it is, is intended to refer to the transition in the colour of the corolla from a delicate transparent white to an opaque rosy red, the circumstance which constitutes the singularity and one of the beauties of the species. It grows from about two to three feet high, and is loaded with blossom round the middle of the branches, from the latter part of the autumn far into the winter.

It is becoming universal in our greenhouses, and deservedly so, on account of its easy culture, and abundant elegant blossom.

Drawn at the Nursery of Messrs. Colvill, in the King's Road, Chelsea.

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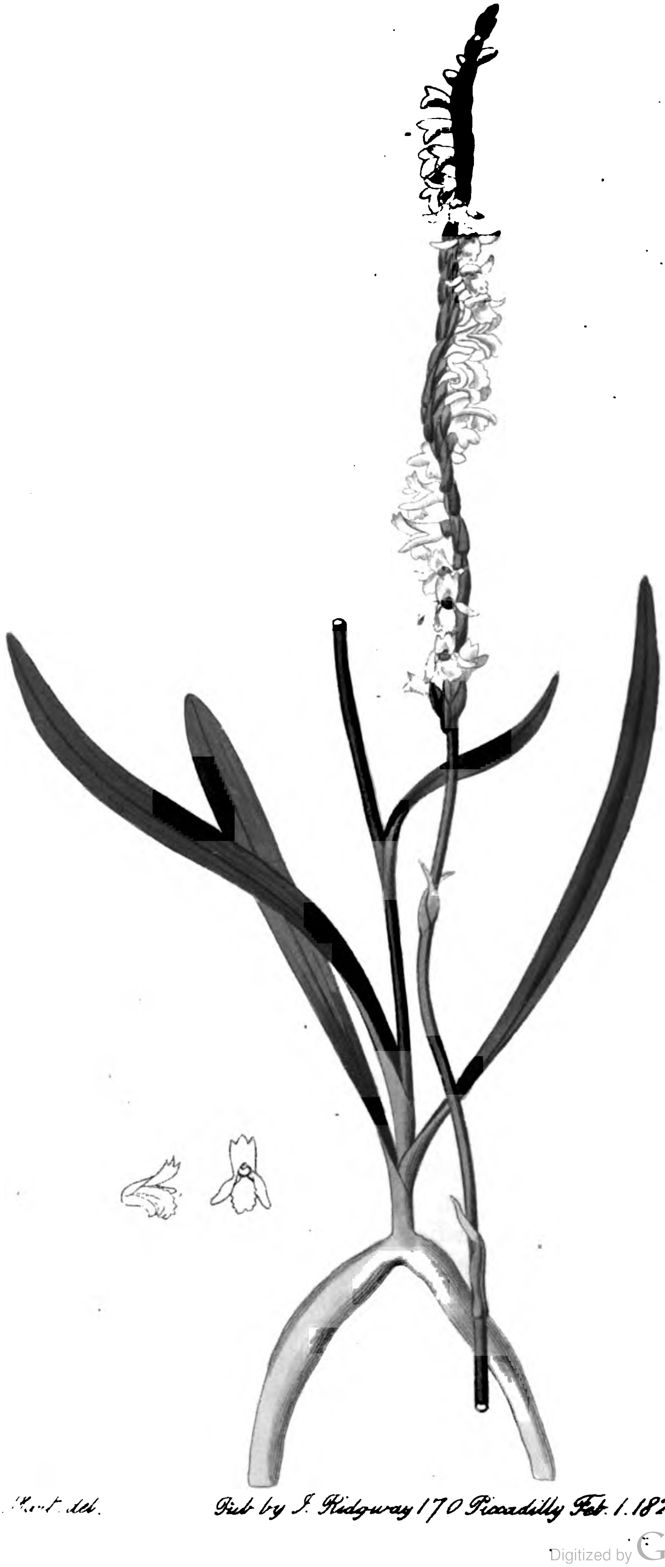
602



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602

NEOTTIA australis; *β. chinensis.*

Chinese Neottia or Ladies' Traces.

GYNANDRIA *MONANDRIA.*

Nat. ord. Orchideæ. *Jussieu gen.* 64. *Brown prod.* 1. 309. *Div. II. Anthera* stigmati parallela persistens. *Massæ pollinis* v. farinaceæ v. è corpusculis angulatis; apicibus stigmati affixæ. *Brown in Hort. Kew. ed.* 2. 5. 197.

NEOTTIA. Cor. ringens: petalis exterioribus anticis labello imberbi suppositis; interioribus conniventibus. *Columna* aptera. *Pollen* farinaceum. *Brown in Hort. Kew. ed.* 2. 5. 198.

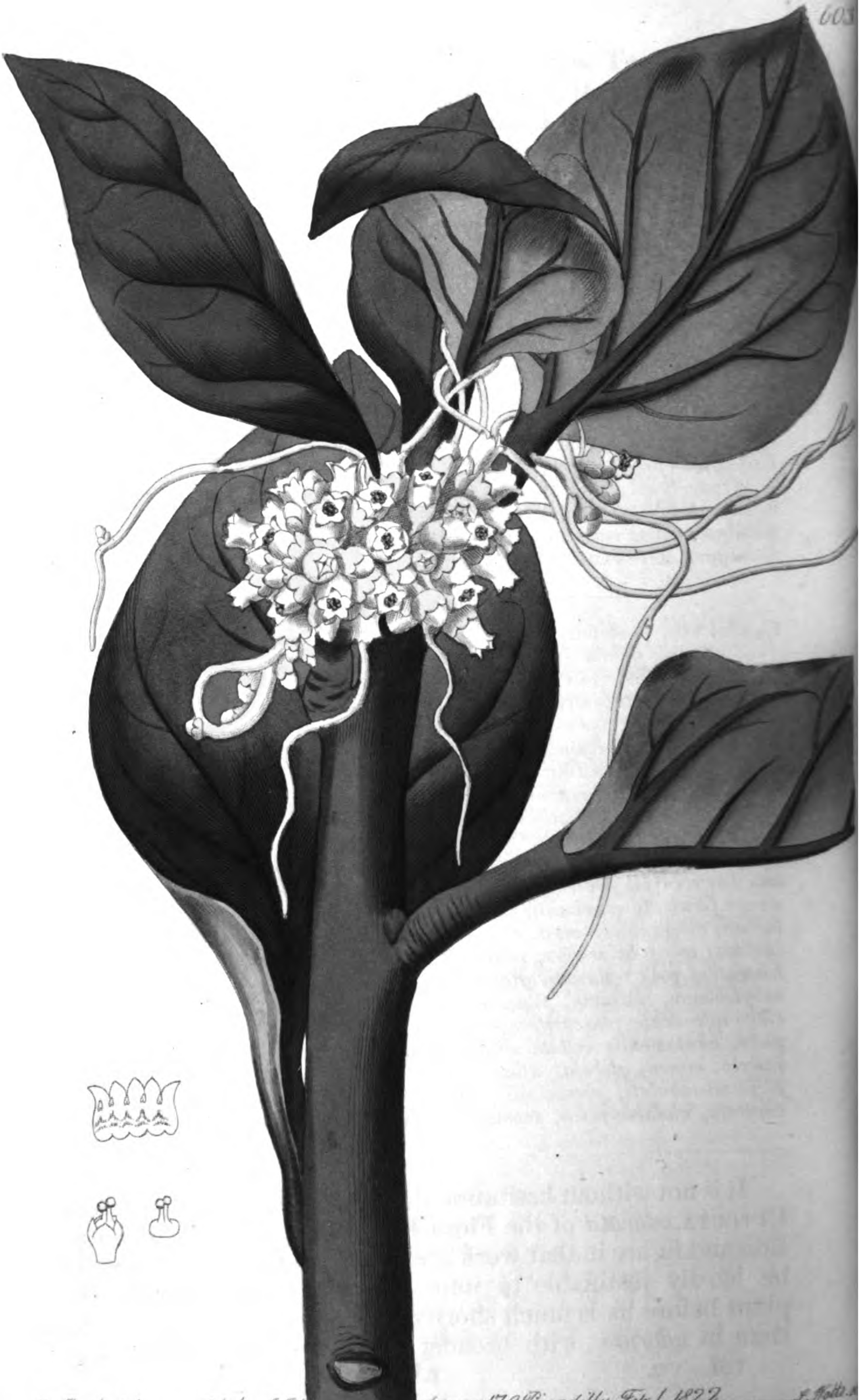
N. *australis*, labello indiviso oblongo crispato: basi bilingulatâ, columnæ lobulis lateralibus stigmate longioribus, spicâ tortili, foliis radicalibus lanceolatis, bulbis oblongis. *Brown prod.* 1. 319.

(*β*) Spiranthes *pudica:* foliis lineari-lanceolatis, labello subsessili apicem versùs crenulato, callis subrotundis; perianthii laciniis ovario rachique glaberrimis. *Lindley collect.* 30.

Folia *erecta, lineari-lanceolata, acuta, plana, enervia.* Scapus *glaberrimus, teres, subflexuosus, bracteis vaginantibus acuminatis vestitus.* Flores *parvi, albi, erubescentes, in spicâ tortili glaberrimâ horizontalitèr dispositi.* Laciniæ *glaberrimæ, ovato-lanceolatæ, obtusæ, cum labello parallelæ.* Labellum *brevitèr pedicellatum, oblongum, apice dilatatum, pubescens, columnæ marginibus oppositis amplectens; basi callis* 2 *villosis globosis munitum.* Columna *porrecta, clavata, anticè* gynizum (stigma, *v. si mavis* areola secernens stigmatis) *hemisphæricum viridissimum glabrum ferens, apice in linguam lanceolatam obtusiusculam dorso uniglandulosam productum.* Anthera *postica erecta bilocularis,* massas pollinis 4 *farinaceas per paria cohærentes glandulæ gynizi adhærentes promens.* Id. loc. cit.

Drawn in Mr. Griffin's conservatory at Lambeth. Introduced by the Horticultural Society from China. We had no opportunity of inspecting the plant; but comparing our figure and the description we have quoted above with the character given by Mr. Brown of Neottia *australis,* a native of India as well as New Holland, we can as yet see no sufficient ground for determining a difference in their species. At all events no distinction has been pointed out, nor the two compared by any author; and until that has been done they are evidently too near akin to be idly disposed of by different names.

The Chinese plant is very like the "Ladies' Traces" (NEOTTIA *spiralis*) of our own country. Whether the ARISTOTELEA *spiralis* of Loureiro belongs here or not, can scarcely be satisfactorily decided from the description given by that author. We should think it cannot be far off from the present species.



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CUSCUTA chilensis.

Chili Dodder.

TETRANDRIA (*s. potiùs* PENTANDRIA) *MONOGYNIA.*

Nat. ord. CONVOLVULI. *Jussieu gen.* 132. *Div. III.* Genera Convolvulis affinia.

CONVOLVULACEÆ. *Brown prod.* 1. 481. *Sect. III.* Embryo acotyledoneus.

CUSCUTA. *Cal.* 5- rarò 4-fidus. *Cor.* globoso-urceolata, limbo 5-fido, marcescens. *Germ.* 2-loc., loculis dispermis. *Caps.* bilocularis, circumscissa. *Herbæ aphyllæ, volubiles, parasiticæ. Flores aggregati, subcapitati v. spicati, unibracteati. Squamæ* 5, *epipetalæ, infra filamenta, iisdemque oppositæ, rarò deficientes.* Brown prod. 1. 491.

OBS. E speciebus 10 examini subjectis novem constanter decimam sæpè floribus 5-fidis observavi: unica monogyna est, digynarum duæ tantùm stigmatibus acutis, unica inedita absque squamis epipetalis quæ in C. *europæâ* et *monogynâ* certè extant. *Brown l. c.*

C. *chilensis*, pentandra, digyna, floribus 5-fidis; calyce ter breviore corollâ, segmentis oblatis rotundatis; corollâ intùs infra medium fimbriato-squamatâ laciniis ovatis, tubo ter brevioribus, recurvis; antheris sessilibus; stylo altero breviore; stigmatibus pileato-capitatis.

Filum herbaceum ochroleucum aphyllum volubile radicans semperflorens. Flores *paniculato-congesti ochroleuci odori pedunculis pedicellisque succulentis obesis brevissimis nitidis bracteatis:* bracteæ *squamaceæ, appressæ, calycis concolores, obovatæ v. ovato-rotundæ.* Cal. *corollâ crassior triploque brevior, oblato-cupulatus, pedicelli continuus, persistens, 5-partitus segmentis rotundatis, corollæ applicitis.* Cor. *alba, apice sæpiùs erubescens, oblonga, ovato-cylindrica, marcescens, decidua, 5-fida laciniis tubo triplo v. quadruplo brevioribus recurvis ovatis æqualibus; ad basin 5-fissilis:* squamæ 5 *membranaceæ fornicato-conniventes, corollæ concolores, infra antheras insertæ, limbi laciniis alternantes, ovatæ, fimbriatæ lacinulis denticulato-micantibus.* Anth. *inclusæ, ore tubi sessiles, introrsæ, oblongæ, biloculares, utroque latere dehiscentes:* pollen *flavum, granulosum.* Pist. *corollæ tubo subæquale:* germ. *subglobosum, nitidum, supernè violaceo-pallens, disco patelliformi aurantiaco-splendente placentifero circumscisso-insidens, biloculare septo incompleto, loculamentis collaterali-dispermis:* ovula *imo angulo loculamentorum inserta, erecta, globosa, alba, opaca:* styli 2, *paralleli, contigui, erecti, filiformi-subulati, obesiusculi, albidi, alter altero longior;* stig. *pileato-capitata, violaceo-fusca, subanguloso-rugata, à cavitate pilei infixa.*

It is not without hesitation that we separate this plant from CUSCUTA *odorata* of the Flora Peruviana; yet if the description and figure in that work are to be relied on at all, it would be hardly justifiable to unite the two. The calyx in the plant before us is much shorter in proportion to the corolla than in *odorata,* with broader shallower and rounder seg-

ments, the limb of the corolla is also much shorter in proportion to the tube, with blunter-ended segments; but a far more material point is, that the stamens in *odorata* are described and figured with filaments, while in *chilensis* the anthers are sessile; nor is any notice taken in either figure or description of *odorata* of the different lengths of the two styles so remarkable in *chilensis*. Both are natives of no very distant parts of the same continent.

We are informed by the very intelligent superintendent of the Horticultural Society's Garden, Mr. Monro, that the plant has been lately introduced from South America. The annexed figure, which was drawn in the above garden, represents it clinging to the Red Malabar Nightshade (Basella *rubra)* which had been selected in the hothouse for the foster-plant. The flowers seem larger in proportion to the greater succulence of the plant on which their parent grows.

In the Banksian Herbarium we found an unnamed sample of the species collected by Mr. Menzies at Valparaiso, in Chili. The genus consists wholly of parasites, or, as they were formerly termed, superplants. The English species, which are two, are called Dodder. *Dotter* is one of the German names for them, though it belongs likewise to other very different vegetables. The Spanish Creoles of South America call them *Cabellos de Angel (Angel's hair).*

Doddered, as an epithet to trees, has probably been used metonymically, being intended for a tree covered with any of the smaller kinds of superplants, such as Liverworts, &c. &c. Shakespeare applies the term to the Oak; but Dodders attend only upon herbaceous plants, and the smaller shrubs, and are never found upon trees. We suspect that Dodder was formerly a general appellation for all the lesser vegetable parasites.

The seed should be sown near the intended support. Roots are soon sent forth, and the seedling is sustained by the soil until it has settled itself, when with the lower part of the stem, it withers away; and thus flowering, seeding, and withering at the bottom in succession, while it grows on at the top, it overruns and often either starves or stifles in the end the vegetable on which it has fed.

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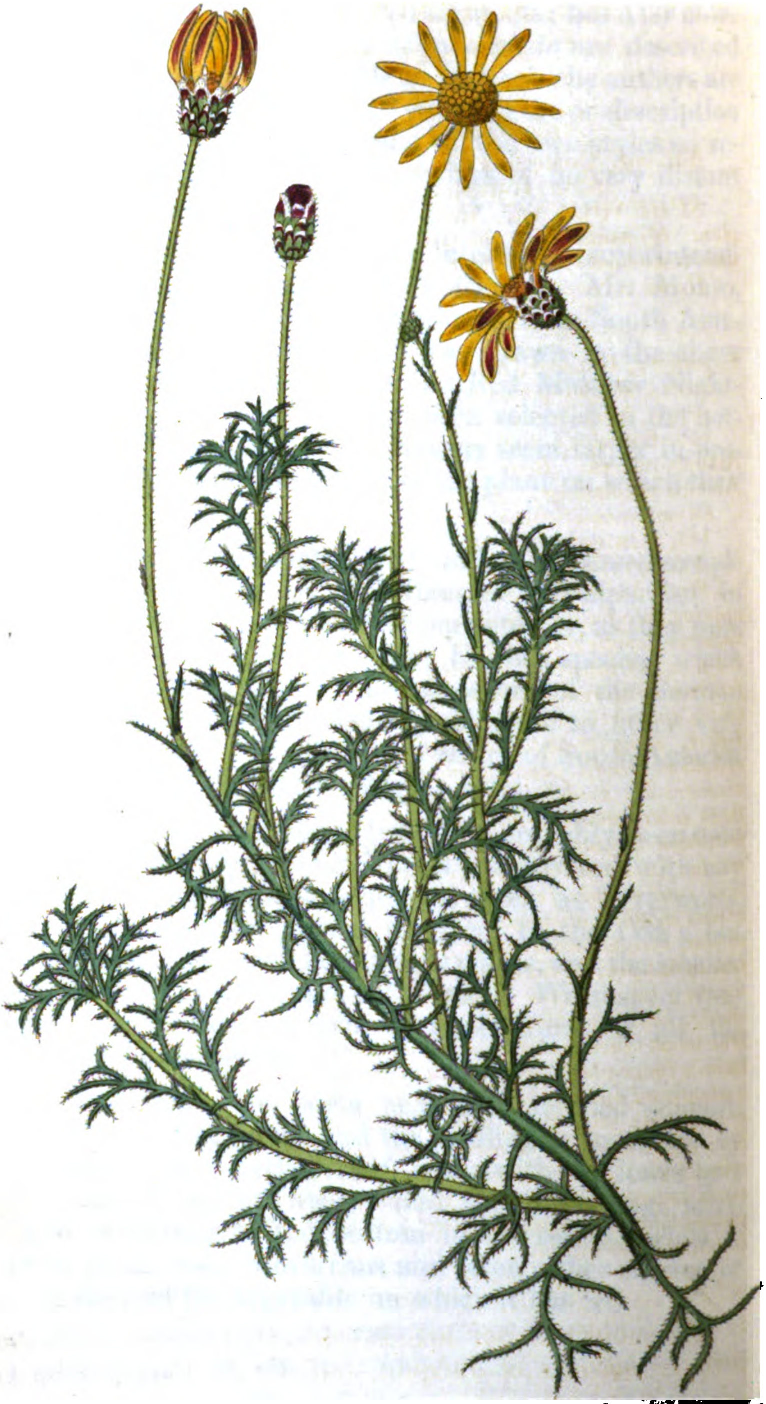


M. Hart. del. Pub by J. Ridgway 170 Piccadilly Feb. 1. 1822. J. Watts sc.

SPHENOGYNE pilifera.

Hair-tipped Sphenogyne.

SYNGENESIA *POLYGAMIA FRUSTRANEA.*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. VI.*

SPHENOGYNE. Recept. paleis distinctis. *Pappus* paleaceus, simplex. *Stigmata* apice dilatato subtruncato. *Cal.* imbricatus: squamis intimis (omnibusve) apice dilatato scarioso. *Brown in Hort. Kew. ed.* 2. 5. 142.

Herbæ vel sæpiùs frutices Australi-africanæ.

S. *pilifera,* fruticosa, pilosiuscula, erecta, ramosa, foliis frequentibus carnosis linearibus pinnatifidis bipinnatifidisve, summis bi-trifidis v. indivisis: pappo flosculis disci pluriès breviore: paleis receptaculi inclusis truncatis flosculos semiamplectentibus.

Arctotis pilifera. *Berg. cap.* 356. *Willd. sp. pl.* 3. 2360.

Arctotis crithmoides. *Jacq. hort. schœnb.* 2. 15. *t.* 155; (*non aliorum, quæ est eadem cum* Sphenogyne crithmifoliâ. *Brown in Hort. Kew. ed.* 2. 5. 142, Arctotide fœniculaceâ. *Jacq. hort. schœnb.* 2. 15. *t.* 156, *atque* Arctotide paleaceâ. *Willd. sp. pl.* 3. 2359.)

Fruticulus *alternè ramosus;* rami *adscendentes, virentes, teretes, villosi, approximato-foliosi, lineati.* Fol. *sparsa, numerosa, carnosula, pilosa, immerso-puncticulata, lineari-pinnatifida v. rariùs bipinnatifida (superiora 2-3-fida vel integra), semuncialia v. circà, lobis alternis v. oppositis, nunc foliorum lyratorum ad instar infernè versùs gradatìm brevioribus, setulâ brevi subtili apiculatis, rachide utrinque sulcatâ.* Pedunculi *terminales, solitarii, 1-flori, elongato-filiformes (sub3unciales?), erecti, pilosiusculi, lineati, aphylli v. foliolis paucis subulatis appressis bracteati.* Flores *flavi, erecti, diametro vix unciali.* Cal. *cupulatus, bis brevior radio v. ultrà, viridi et fusco subtessellato-varius, glaber, sub4seriato-imbricatus;* foliola *erecta, introrsùm longiora, margine scariosa, et pone marginem lineâ fuscâ circumnotata:* intima *ovato-oblonga, laminâ scariosâ pallidâ erectâ latè ovatâ convexâ cum maculâ fuscâ in disco appendiculata;* media *ovato-lanceolata;* extima *subulato-attenuata.* Radius *plurimus, neuter, stellatus, subtùs rubicundus, revoluto-emarcescens;* flosculorum *lamina lineari-ligulata plana obtusa subintegra, subtùs et summo tubo pube minutâ glandulosâ diaphanâ laxiùs aspersa;* tubus *rectus gracilis subvirescens:* Discus *numerosus flavus, hermaphr., convexiusculus, radio 3-4plo brevior;* flosc. *obversè cylindracei, glabri;* tubus fauce *continuâ parùm ampliatâ pentagonâ longior;* limbus *luteus laciniis fauce pluriès brevioribus apice incrassato acuto:* anth. *flavæ valvulis 5 minutis ad apicem, basi integerrimæ;* fil. *elastico-extensilia;* pollen *flavum granulosum:* stig. *flava, apice subcristato-dilatata pubentia, cæterum glabra:* germ. *lanâ baseos obvallatum, tubo flosculi brevius, lineari-oblongum, cylindricum; paleæ 5* pappi *tenues ovato-rotundæ glabræ germine duplo breviores convoluto-imbricatæ.* Recept. *planiusculum, paleaceum;* paleæ *diaphano-albicantes, oblongæ, disco ¼ v. circà breviores, flosculos semiamplectentes, eroso-truncatæ.*

The subject of our article evidently belongs to the Arctotis *crithmoides* of Jacquin, but not to Bergius's species

with the same name, as was supposed by Jacquin and Willdenow. ARCTOTIS *crithmoides* of Bergius is SPHENOGYNE *crithmifolia* of Mr. Brown in the Hortus Kewensis, and the same with ARCTOTIS *paleacea* of Linnæus as well as ARCTOTIS *fœniculacea* of Jacquin. It is this inadvertence in Willdenow that has occasioned the repetition of *paleacea* and *pilifera*, in his Species Plantarum, under the titles of *crithmoides* and *fœniculacea*.

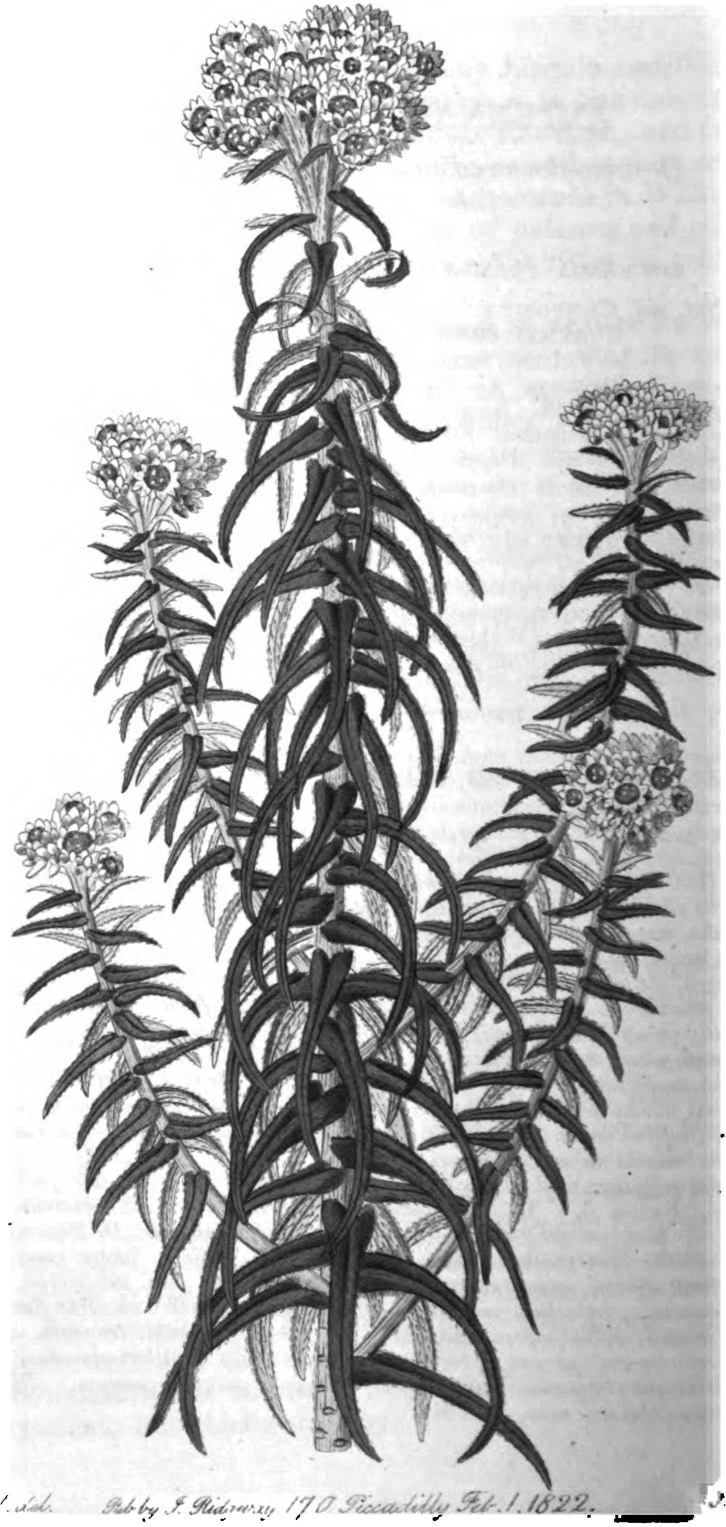
Pilifera in general appearance comes so near to ARCTOTIS *paradoxa* (URSINIA *paradoxa* of Gærtner) that the two are not easily distinguishable without an attentive inspection of the flower. In *paradoxa* the pappus is much longer than the germen, and nearly as long as the florets, and the paleæ of the receptacle are higher than the disk, the florets of which they envelop all the way round; in *pilifera* the pappus is shorter than the germen and several times shorter than the floret, and the paleæ of the receptacle lower than the disk, the florets of which they envelop only half way round; the anthers are black in the first, yellow in the second; the segments of the florets of the disk have a dark-coloured callus at their back in *paradoxa*, but not in *pilifera*.

Is it likely that the two should be the counterparts of a dioicous species?

We suspect the inner series of the double pappus attributed by Gærtner to his URSINIA *paradoxa* to be a mere remnant of the floret itself, and that the plant is a very good SPHENOGYNE. Neither Linnæus nor Solander has noticed this second pappus, though the latter has described very minutely this member of the seed in a manuscript note concerning *paradoxa* in the Banksian Library.

The drawing was taken in the greenhouse of the nursery belonging to Messrs. Colvill in the King's Road, where the plant had been raised from seed from the Cape of Good Hope, and was in flower during last December. We are not aware that it has been introduced into this country before. It is a branching upright thickly-leaved bush about two feet high. The ray of the corolla rolls itself close up backwards in the evening, and spreads again in the morning, for several days in succession. The flower when bruised smells like Chamomile.

SPHENOGYNE is a wholly South African group, partly herbaceous, but chiefly shrubby.



M. Hart. del. Pub by J. Ridgway 170 Piccadilly Feb. 1. 1822. J. Watts sc.

ANTENNARIA contorta. *Mas.*

Barren-flowered twisted-leaved Everlasting.

SYNGENESIA *POLYGAMIA NECESSARIA (monente D. Brown).*

Nat. ord. Compositæ. *Adanson fam.* 2. 103.
Corymbiferæ. *Jussieu gen.* 177. *Div. I.* Receptaculum nudum. Semen papposum. Flores flosculosi.
Inuleæ. *Cassini. Tribus.* Inuleæ-Gnaphalieæ.

ANTENNARIA. Involucr. imbricatum, scariosum, coloratum. *Recept.* epaleatum, scrobiculatum. *Flosculi* dioici. Masculi: *antheris* basi bisetis: *stigmatibus* truncatis: *Pappo* vel penicillato v. apice incrassato. Feminei filiformes, limbo parvo: *staminum* rudimentis nullis: *Pappo* capillari. Herbæ *perennes, tomentosæ, incanæ.* Folia *plana, adulta sæpè super glabriuscula; radicalia in plerisque latiora.* Inflorescentia *corymbosa rarò solitaria.* Involucri *turbinati vel quandoque hemisphærici squamæ è basi calycinâ supernè coloratæ (albæ v. purpurascentes).* Corollulæ *flavæ.* Antheræ *semiexsertæ.* Pappus *marium niveus, opacus. Hùc* Gnaphalium *dioicum* Linn., *alpinum* L., *carpaticum* Wahlenberg, *plantaginifolium* L. et *margaritaceum* Linn. *Brown in trans. lin. soc.* 11. 122.

A. *contorta* tomentosa; caule erecto, ramoso, foliis linearibus mucronulatis decurvis margine deflexis, senioribus obliquatis (contortis) suprà nudiusculis; corymbis paucifloris simplicibus vel prolifero compositis, foliolorum calycinorum laminis oblongis obtusis. *Don MSS.*

Gnaphalium contortum. *Buchanan MSS.*

Herba *perennis? sesqui-bipedalis, basi lignescens:* rami *sparsi simplices teretes albo-lanati floribus tenùs foliosi.* Fol. *sparsa, approximata, crebra, sessilia, linearia, decurvo-reflexa, convexa lateribus deflexis, mucronulata, basi latiora, subtùs albo-lanata, rachide suprà depressâ;* seniora *sesquiuncialia v. circà, obliqua (contorta), suprà nudiuscula cinereo-virentia, rachide subtùs prominente.* Corymbi *terminales capitato-pauciflori vel prolifero-compositi;* pedicellis *brevissimis lanatis squamaceo-bracteatis.* Flores *flosculosi, masculi, albo-cinereoque varii, magnitudine fermè Pisi mediocris.* Involucr. (cal.) *cupulatum, scarioso-candicans, squarrosum, basi lanatum, disco subaltius;* foliola *sub4serialia, plurima, glabra, elongato-spathulata, medio reflexa, infernè erecta laxiùs imbricata, supernè patentissima,* ungue *cuneato nitido maculâ in medio lineari-lanceolata viridi notato, suprà fuscescente,* laminâ *sublatiore ovali-oblongâ obtusè acuminatâ opacâ candicante patentissimâ.* Radius 0. Discus *plurimus, convexiusculus, viridi-cinereus, pubescens:* flosc. *parvuli, cylindrici, glabri, singuli (monente D. Brown) insidentes disco (corpusculo carnoso) epigyno germine majore;* limbus *virescens, profundè divisus, campanulatus, laciniis acuminatis:* anth. *subexsertæ, basi villoso-setosæ, valvulis 5 subulatis erectis apiculatæ;* pollen *vitellino-flavens;* fil. *elastica:* stylus *supernè virescens;* stig. *virentia, brevia, truncata, apice pubentia:* germ. *parvum, abortivum;* pappus *albus capillari-clavatus, flosculis longior, supernè denticulatus.* Recept. *parvum, nudum. Planta feminea nobis non nota.* Don MSS.

In the article **ASTELMA** *eximium* (fol. 532 of the present volume) we have already said that **ANTENNARIA** was originally separated from **GNAPHALIUM** by Gærtner, and subsequently divided into **METALASIA**, **LEONTOPODIUM**, and **ANTENNARIA** by Mr. Brown. As it now stands it consists wholly of dioicous species, the staminiferous counterparts of which have the radii of their pappus of a shape somewhat resembling that of the Antennæ or Feelers of an insect; and hence has arisen the generic name.

We received from Mr. Herbert the sample for the drawing. The plant was raised at Spofforth, and has been, we believe, now first introduced into this country. The species was originally observed by Dr. Hamilton (then Buchanan) near the town of Narainhetty in Nepal, and samples collected in the native spot are preserved in Mr. Lambert's Herbarium. The more immediate source of the present plant has probably been the Botanic Garden at Calcutta. Four other unrecorded species of the genus were found by Dr. Hamilton in the same country; two of them, nearly allied to the well-known *margaritacea*, and distinguished by the Doctor by the names of *Busua* and *Timmuia*, are said to be in the same request for the boughpot among the natives as the Everlastings are with us.

The plant before us is the staminiferous counterpart of the species, the pistilliferous is probably not in this country. *Don MSS.*

NOTES.

Ricotia *ægyptiaca.* *Vol.* 1. *fol.* 49.

The above long-established specific name had been lately changed by M. De Candolle, because that learned botanist had never heard of the plant being found in Egypt, but only in Syria. We have no respect for such alterations.

Ricotia *Lunaria.* *Decand. syst. veg.* 2. 284.

Fumaria *eximia.* *Vol.* 1. *fol.* 50.

Since the publication of that article, Fumaria has appeared in a new order and been divided into six genera.

Nat. ord. Fumariaceæ. *Decand. syst. veg.* 2. 105.
DICLYTRA. *Decand. syst. veg.* 2. 107.
Diclytra eximia. *Id. in eod.* 109.

Fumaria *aurea.* *Vol.* 1. *fol.* 66.

Nat. ord. Fumariaceæ. *Decand. loc. cit.*
CORYDALIS. *Id. in eod.* 113.
Corydalis aurea. *Id. in eod.* 125.

Ipomœa *insignis.* *Vol.* 1. *fol.* 75.

Add the following synonyms in that article.

Ipomœa gossipiifolia. *Willd. enum.* 1. 208. *Link enum. hort. reg. berol.* 1. 199.

Gladiolus *edulis.* *Vol.* 2. *fol.* 169.

Gladioli Species.

Cunonia.		*Nob. in ann. of bot.* 1. 280. Antholyza Cunonia. *Curt. mag. t.* 343.
watsonius.		*Curt. mag. t.* 450. *et* 569.
quadrangularis.		*Nob. in curt. mag. t.* 567.
permeabilis.		*De la Roche pl. nov. desc. n.* 1. *t.* 2.
viperatus.		*Nob. in curt. mag. t.* 688.
alatus.		*Nob. in curt. mag. t.* 586.
namaquensis.		*Nob. in curt. mag. t.* 592. equitans. *Vahl enum.* 291.
hirsutus.	(α) *aphyllus.*	*Nob. in curt. mag. t.* 992. brevifolius. *Jacq. ic. rar.* 2. *t.* 249. tristis. i. *aphyllus. Thunb. de glad.* 8.
	(β) *brevifolius.*	*Nob. in curt. mag. t.* 727. brevifolius. *Jacq. fragm. t.* 2. *fig.* 3. Orobanche. *Redouté liliac. t.* 125. carneus. *Andrews's reposit. t.* 240. tristis; k; *ruber. Thunb. de glad.* 8.
	(γ) *villosiusculus.*	*Nob. in curt. mag. t.* 828. tristis. l. *purpureus. Thunb. de glad.* 8. Gladiolus *&c. &c. Breyn. cent.* 24. *t.* 12. *fig.* 1.
	(δ) *roseus.*	*Nob. in curt. mag. t.* 574. *Jacq. ic. rar.* 2. *t.* 250. *Redouté liliac. t.* 273. roseus. *Andrews's reposit. t.* 11.

hirsutus	(ε) *tenuiflorus.*	*Nob. in curt. mag. fol. verso* 727. Merianellus. *Thunb. de glad. n.* 11. *prod.* 7. *Willd. sp. pl.* 1. 214; *(excl. Millero). Vahl enum.* 2. 94. Antholyza Merianella. *Reich. sp. pl.* 198. *Lin. syst. veg. ed.* 14. 88; *(excl. Millero. Neque est* Antholyza Merianella, *Horti Kewensis neque Curt. mag.* quæ est Watsonia aletroides).
versicolor	(α) *major.*	*Nob. in curt. mag. t.* 1042. versicolor. *Andrews's reposit. t.* 19. grandis. *Thunb. prod.* 185. *Vahl enum.* 2. 87.
	(β) *inertis.*	*Nob. in curt. mag. t.* 1042.
	(γ) *inæqualis.*	*Nob. in curt. mag. fol.* 556. Gladiolus &c. &c. *Breyn. prod. pl. afr.* 2. 20. *t.* 7. *fig.* 2. Gladiolus tristis; *minor. Solander in herb. banks.*
	(δ) *tenuior.*	*Nob. in curt. mag. t.* 556. Gladiolus tristis; *inodorus. Thunb. de glad.* 8.
	(ε) *longifolius.*	*Nob. in curt. mag. fol.* 556. elongatus. *Thunb. prod.* 185. *Vahl enum.* 2. 81. Gladiolus tristis; [illegible] *var. Jacq. ic. rar.* 2. *t.* 245.
tristis.		*Curt. mag. t.* 272. (β.) *Nob. in loc. cit. t.* 1098. concolor. *Salisb. paradis. t.* 8.
trichonemifolius.		*Nob. in curt. mag. t.* 1483.
hyalinus.		*Jacq. ic. rar.* 2. *t.* 242.
tenellus.		*Jacq. ic. rar.* 2. *t.* 248. (β.) *Ejusd. coll.* 4. *t.* 3. *fig.* 1.
setifolius.		*Vahl enum.* 2. 100.
gracilis.		*Nob. in curt. mag. t.* 562. (β.) lævis. *Vahl enum.* 2. 83.
recurvus.		*Nob. in curt. mag. t.* 578. *Lin. mant.* 28.; *(non Thunb.).* carinatus. *Hort. Kew. ed. prior.* 1. 64. *Vahl enum.* 2. 82. *Redouté liliac. t.* 123. punctatus. *Jacq. ic. rar.* 2. *t.* 247. tristis; (γ) *punctatus odorus. Thunb. de glad.* 12. Gladiolus. *Miller ic. t.* 235. *fig.* 2. alatus. *Schneevogt ic. t.* 12. ringens. *Andrews's reposit. tt.* 27. 227.
carneus.		*Nob. in curt. mag.* 591. *Jacq. ic. rar.* 2. *t.* 255. cuspidatus. *Andrews's reposit. t.* 147. *Redouté liliac. t.* 36. ventricosus. *Lamarck illustr.* 1. 118.
cuspidatus.		*Nob. in curt. mag. t.* 582; *(excl. Thunb.) Jacq. ic. rar.* 2. *t.* 257. *Andrews's reposit.* 219. *Redouté liliac. t.* 13. undulatus. *Linn. mant.* 57.
blandus.	(α) *carneus.*	*Nob. in curt. mag. t.* 625. carneus. *De la Roche pl. nov. desc. t.* 4. *Redouté liliac. t.* 65. Gladiolus; *Breyn ic. rar.* 2. *t.* 70. *fig.* 2.
	(β) *niveus.*	*Nob. in curt. mag. t.* 648. albidus. *Jacq. ic. rar.* 2. *t.* 256. blandus. *Andrews's reposit. t.* 99.
	(γ) *purpurascens.*	*Nob. in curt. mag. t.* 645. campanulatus. *Andrews's reposit. t.* 188. Huc verosimilitèr referendi *trimaculatus.* Vahl enum. 2. 85; et *inflatus.* Ejusd. enum. 2. 87.
	(δ) *excelsus.*	*Nob. in curt. mag. t.* 1665.
angustus.		*Nob. in curt. mag. t.* 602. *Jacq. ic. rar.* 2. 252. *Hort. cliff. t.* 6. *Mill. ic. t.* 142. *fig.* 2. *Andrews's reposit. t.* 589. *Redouté liliac.* 344.
involutus.		*De la Roche pl. nov. desc. n.* 2. *t.* 3. *Mill. ic. t.* 290. *fig.* 1.
hastatus.		*Nob. in curt. mag. t.* 1524. *Thunb. in act. soc. nat. hafn. vol.* 6. *ejusd. prod.* 185; *(excl. Jacq.)* tristis; (α) *hastatus. Thunb. de glad. n.* 8.
edulis.		*Nob. suprà vol.* 2. *t.* 169.

undulatus.	*Nob. in curt. mag.* (α) *tab.* 647. (β) *tab.* 538. *Schneevoogt ic.* 18. *Jac. ic. rar.* 2. 251; *(non Linnæi).* striatus. *Andrews's reposit.* 111. Gladiolus. *Mill. ic.* 292. *fig.* 2.
floribundus.	*Nob. in curt. mag. t.* 610. *Jacq. ic. rar.* 2. *t.* 254. grandiflorus. *Andrews's reposit.* 118.
Milleri.	*Nob. in curt. mag. tab.* 632. Antholyza *&c. &c.* *Mill. ic. t.* 40.
cardinalis.	*Curt. mag. t.* 135. *Redouté liliac. t.* 112.
byzantinus.	*Nob. in curt. mag. tab.* 874.
communis.	*Curt. mag.* (α) *tab.* 86. (β) *carneus. Nob. in curt. mag. tab.* 1575. neglectus. *Schultes obs. bot. in sp. pl. willd.* 14.
segetum.	*Nob. in curt. mag. tab.* 719. *Hort. Kew. ed.* 2. 1. 102. communis. *Bulliard herb. de la france. Flora græc.* 1. *tab.* 37. imbricatus. *Linn. sp. pl. ed.* 2. 1. 52. tenuis. *Marsch. bieb. fl. taur. cauc.* 1. 29. rossicus. *Persoon syn.* 1. 46; *(excl. var. β.)* Glad. italicus. *Park. parad. t.* 191. *fig.* 2. *β.)* triphyllus. *Flora græc. t.* 38.

Species ulteriùs cognoscendæ.

flexuosus.	*Thunb. de glad. t.* 1. *fig.* 1; *(anne* TRITONIÆ *accensendus? vel potius sui generis?)*
exscapus.	*Vahl enum.* 2. 80. flexuosus. *Linn. suppl.* 96; *(non Thunbergii).*

Cheiranthus *Cheiri*; γ. Chameleon. *Vol.* 3. *fol.* 219.

In the 2d page of the 2d leaf of the 551st article of this publication, we had observed, that this plant belonged to an already recorded species, that it belonged to the Island of Teneriffe, and that the following alterations were requisite.

CHEIRANTHUS scoparius; γ. *Chameleon.*

Teneriffe Wallflower.

C. *scoparius*, foliis lineari-lanceolatis acuminatis integris pube adpressâ bipartitâ subpubescentibus, caule fruticoso ramoso. *Decand. syst. veg.* 2. 184.

Cheiranthus scoparius. *Willd. enum.* 6. *v.* 1. *Decand. monsp.* 94. *Hornem. hort. hafn.* 613.

Hesperis cinerea. *Poir. suppl.* 3. 196.

(α) *purpurascens.* (β) *æruginosus.* (γ) *Chameleon.*

Deemed nearest to *mutabilis*, but of a harder and stouter habit, with stiff branches, entire and generally greyish leaves, and a more dense pubescence of 2-3-parted hairs. Introduced from the Berlin garden, and not from Moscow, as we had been misinformed.

Dianthus *crenatus.* *Vol.* 3. *fol.* 256.

The following synonym should be added in the above article. Jacquin was not aware of his plant belonging to a recorded species.

Dianthus prostratus. *Jacq. hort. schœnb.* 3. 11. *t.* 271.

Indigofera *filifolia.* *In notis appendicis vol.* 3.

This species has been since published in Curtis's Botanical Magazine under the title LEBECKIA *nuda*, and seems not to have been recognised as previously published.

NOTES.

Convolvulus *involucratus*. *Vol.* 4. *fol.* 318.

This has been since published in Curtis's Magazine under the title C. *bicolor*, as being the same as the species of that name in Dr. Roxburgh's Manuscripts, which it may possibly be; but it is nevertheless that we have given it for, and of course should be continued by the title under which it has been long previously published.

Erysimum *diffusum*. *Vol.* 5. *fol.* 388.

M. De Candolle has changed the original specific name to *canescens*, as one that is better suited. To us we own the name first recorded is always the best. M. De Candolle also suspects that the drawing annexed to the above article may rather belong to *lanceolatum* than to *diffusum*; but does not say why. We again suspect that the whole may be left as it is, with the addition of the following synonym.

Erysimum canescens. *Decand. syst. veg.* 2. 500.

Hovenia *acerba*. *Vol.* 6. *fol.* 501.

We were indebted for the above article to Mr. Lindley, who had distinguished the plant from Hovenia *dulcis*, principally by the supposed entire-edged leaves and unpalatable small fruit. It has been subsequently discovered, by samples from the same plant in Mr. Lambert's collection at Boyton, that Mr. Lindley, as well as our artist, has overlooked the serrature of the leaves, and that in reality these are serrated and not entire. This being the case we see no reason for distinguishing the plant from Hovenia *dulcis*, though it has not ripened its fruit to the perfection it does in its native climate. Mr. Lambert tells us that it was raised from seed sent to him by Dr. Wallich from India. The following alterations should be made in the above article.

Hovenia dulcis.
Japanese Hovenia.

Hovenia dulcis. *Thunb. jap.* 101. *Willd. sp. pl.* 1. 1141. *Lamarck illustr. t.* 131. *Smith in Rees's cyclop. in loco.*
Sickù vulgò Ken et Kenopkonas. *Kæmpf. amæn. fasc.* 5. 808. *t.* 909.

Native of Japan, where it is much cultivated, as well as in China, for the sake of its fruit, of the nature of which it has already been spoken in the above article. Said to grow to a small tree about 12 feet high. The leaves are described as smooth by Thunberg, but are known from native samples to be finely furred.

Ixia *maculata:* cæsia. *Vol.* 7. *fol.* 530.

Ixiæ species.

Veræ.

flexuosa.	*Nob. in curt. mag.* 624. polystachia. *Redouté liliac.* 126. capitata *v. stellata. Andrews's reposit.* 232? Ixia &c. *Mill. ic. t.* 156. *f.* 2.
hybrida.	*Nob. in curt. mag.* 1013. *fol. vers.* flexuosa. *Curt. mag.* 127.
patens.	*Nob. in curt. mag.* 522. *Redouté liliac.* 140. filiformis. *iterùm* 30. *Ventenat cels.* 48. aristata. *Schneevoogt ic.* 32. *β. fl. albo.* leucantha. *Jacq. ic. rar.* 2. 278. candida. *Redouté liliac.* 133.

aristata.		*Nob. in curt. mag.* 589. *Thunb. ix.* 15. *prod.* 9. *Syst. veg. ed.* 14. 85; *(non Willd. sp. pl. nevæ edit. prior. Hort. Kew. quæ est* Sparaxis grandiflora; *suprà vol.* 3. 258).
conica.		*Nob. in curt. mag.* 539. *Redouté liliac.* 138. capitata; *fl. aurantio. Andrews's reposit.* 50. Milleri. *Berg. pl. cap.* 8. maculata; *flava apicibus purpureis. Thunb. ix.* 10. Ixia &c. *Mill. ic. t.* 156. *f.* 1. (β) fusco-citrina. *Redouté liliac.* 86.
maculata.		*Suprà fol.* 530.
erecta.		*Nob. in curt. mag.* 623, 846. *Jacq. hort. schœnb.* 1. *t.* 8. *Thunb. ix.* 18. *Berg. pl. cap.* 5. *Syst. veg. ed.* 14. 85. polystachia. *Lin. sp. pl. ed.* 2. 1. 51. *Hort. Kew. ed. prior.* 1. 58. *Andrews's reposit.* 155. serotina. *Salisb. prod.* 35. Ixia &c. *Mill. ic. t.* 155. *f.* 2.
odorata.		*Nob.* erecta; γ. *lutea, odorata. Nob. in curt. mag.* 1173. *Jacq. hort. schœnb.* 1. *t.* 18; *(tantùm quoad figuram minorem).*
monadelpha.		*Nob. in curt. mag.* 607, 1378. columnaris. *Andrews's reposit.* 203, 211, 213, 250. curta. *Id. eod.* 554. Galaxia ixiæflora. *Redouté liliac.* 41.
columellaris.		*Nob. in curt. mag.* 630. columnaris; var. *angustifolia. Andrews's reposit.* 392.
crateroides.		*Nob. in curt. mag.* 594. speciosa. *Andrews's reposit.* 186.
fucata.		*Nob. in curt. mag.* 1379; *(planta hortensis. Anne* crateroidis *et* capillaris *hybrida?)*

Minùs veræ.

capillaris.	α. *gracillima.*	*Nob. in curt. mag.* 570. linearis. *Thunb. ix. n.* 12. *Willd. sp. pl.* 1. 201. *Vahl enum.* 61. *Hort. Kew. ed.* 2. 1. 86.
	β. *stricta.*	*Nob. in curt. mag.* 617. capillaris. *Thunb. ix. t.* 2. *f.* 2. *Willd. sp. pl.* 1. 201. *Vahl enum.* 2. 60. striata. *eod.* 2. 65. rapunculoides. *Redouté liliac.* 43. lancea. *Jacq. ic. rar.* 2. *t.* 281; *(non Thunbergii, quæ* Tritonia squalida; *nobis in curt. mag.* 581.)
	γ. *aulica.*	*Nob. in curt. mag.* 1013. *Vahl enum.* 2. 60. aulica. *Hort. Kew. ed.* 2. 1. 86. *Willd. sp. pl.* 1. 207. phlogiflora. *Redouté liliac.* 432.
	δ. *incarnata.*	*Nob. in curt. mag.* 617. incarnata. *Jacq. ic. rar.* 2. *t.* 2. 81. *Vahl enum.* 2. 60.
retusa.		*Hort. Kew. ed.* 2. 1. 89. polystachia. *Jacq. ic. rar.* 2. *t.* 275. *Nob. in curt. mag.* 629. *Andrews's reposit.* 128.
scillaris.		*Nob. in curt. mag.* 542; *(exclus. var. β.) Lin. sp. pl. ed.* 2. 1. 52; *(non Thunbergii ix. n.* 14; *quæ est* Geissorhiza imbricata; *nob. in curt. mag. fol. verso* 1105; *in spec. synth.) Redouté liliac.* 127. *Hort. Kew. ed.* 2. 189. pentandra. *Lin. fil. suppl.* 92. *Thunb. ix. n.* 22. *prod.* 10. *Willd. sp. pl.* 1. 207. *Vahl. enum.* 2. 67. polystachiæ varietas. *Jacq. collect. suppl.* 159. *t.* 2. *fig.* 1. reflexa. *Andrews's reposit.* 14. rotata. *ejusd. recens.* 3.
crispa.		*Nob. in curt. mag.* 599. *Redouté liliac.* 433. *Thunb. ix. n.* 8. *t.* 2. *fig.* 3. *prod.* 9. undulata. *Burm. pl. cap.* 1. *Salisb. prod.* 37.

Astelma *eximium. Vol.* 7. 532.

This species has been generally accounted shrubby; but we are informed by Mr. Sweet that the plants are only biennial or triennial, never

NOTES.

surviving the production of the blossom: they seed however freely with us, and are easily propagated. We understand that the like nature has been observed in the country where the species is wild.

Leucojum *tricophyllum*. (∂). *Vol.* 7. *fol.* 544.
We were mistaken in saying that this plant had been received by Mr. Griffin from Lisbon; he received it from Moscow. It is probably native of some of the warmer oriental provinces of the Russian dominions.

Tithonia *tagitiflora*, *Vol.* 7. *fol.* 591; *overleaf; line* 7, *from the bottom.*
For " HELIOPSIS " *read* " TITHONIA."

◆

ERRATA.

Vol. 3. fol. 241. post lin. 7, insere " CAMPANULA. *vol.* 1. *fol.* 56."
Vol. 3. fol. 261. l. 10. pro " *Willd. sp. pl.* 1058," pone " *Willd. sp. pl.* 3. 1058."
Vol. 4. fol. 315. l. 5. pro " 53." lege " 51."
Vol. 4. fol. 327. l. 14 (overleaf); for " petiole not undulated at the base," *read* " petiole not dilated at the base."
Vol. 5. append. fol. vers. 1. l. 19. pro " plant. rar. hung. 3. tab. 220," lege " *plant. rar. hung.* 1. 57. *t.* 57."
Vol. 6. fol. 436. l. 6. pro " *Brown prod.* 2. 520 " lege " *Brown prod.* 1. 520."
Vol. 6. fol. 438. l. 5. post " Div." insere " I."—l. 6. dele " B."
Vol. 6. fol. 490. l. 17 à calce pag. pro " *essenb.*" lege " *esenb.*"
Vol. 6. fol. 508. l. 26. *pro* " tinervi " *lege* " trinervi."
Vol. 7. fol. 528. l. 12. for " LABERTIA " read " LAMBERTIA."
Vol. 7. fol. 528. l. 14. pro " interioriobus " lege " interioribus."
Vol. 7. fol. 532. pag. 4. *for* " and which florets are all both " *read* " and the florets within all both."
Vol. 7. fol. 536. l. 18. pro " *scienc.*" lege " *cienc.*"
Vol. 7. fol. 539. l. 14. pro " *corallam* " lege " *corollam.*"
Vol. 7. fol. 546. page 3. l. 2. for " fuller that " *read* " fuller than that."
Vol. 7. fol. 553. l. 6 à calce pag. pro " *stipitalisque* " lege " *stipitatisque.*"
Vol. 7. fol. 558. l. 3 from bottom (overleaf), dele " the."
Vol. 7. fol. 559. l. 7. pro " *Schulte* " lege " *Schultes*;" passimque in ead. pag.
Vol. 7. fol. 567. l. 5. post " *Jussieu* " adde " *gen.*"
Vol. 7. fol. 570. l. 16. pro " 4-linearibus " lege " 4, linearibus."
Vol. 7. fol. vers. 576. l. 2. for " *iridifolia* " read " *iridiflora.*"
Vol. 7. fol. vers. 591. l. 7 à calce pag. for " HELIOPSIS " read " TITHONIA."

From the Author

AN

APPENDIX.

BY

THE HON. AND REV. WILLIAM HERBERT.

WITH PLATES.

LONDON:
PRINTED FOR JAMES RIDGWAY, PICCADILLY;
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1821.

PRELIMINARY TREATISE.

It was my original opinion that a large group of African bulbs belonged properly to the genus Amaryllis (taking Belladonna, upon which species it was founded by Linnæus, for the type), and that the two extremities of the genus, viz. Belladonna and Undulata, had been improperly cut asunder by the erection of several intermediate species into the genus Brunsvigia. I was, however, induced, by the appearance of the smooth pearl-coloured purpurascent seeds of Belladonna and Blanda, and their obstinately refusing to breed with Undulata and others allied to that species, to give up my first notion, and to define the genus Nerine consisting of a detached group which could only be connected with Amaryllis Belladonna through some of the Brunsvigiæ. The great difficulty in making a perfect arrangement presents itself in the genus Brunsvigia, which has never been clearly defined, though widely adopted, and of which the reputed species exhibit several anomalies. The name of Brunsvigia was given by Heister to Multiflora (Am. Orientalis), which must therefore be considered as the type of that genus; but he only described the plant, and that in some respects very inaccurately, and did not define the peculiarities of the genus. The inflorescence of Josephinæ is conspicuously similar to that of Multiflora, yet its affinity to Blanda is great in the form of the bulb, the number and habit of its leaves, and the length of the tube (in which particulars it differs from the other species of Brunsvigia), and also in the insertion of the filaments, the base of the peduncles, and the very similar appearance of the bud when a few inches high. The affinity of Blanda to Falcata is likewise in many respects very striking, as may be seen at once on reference to the plates of those two species in the Botanical Magazine, which are in most respects accurate. Leaving, therefore, the name of Amaryllis to

Belladonna as applied by Linnæus, I find it absolutely impossible to distinguish the two genera by any just definition without throwing out of the genus Brunsvigia the species with straight peduncles and corolla not bent upwards; and I propose, as the only means by which the genus Brunsvigia can be preserved, to detach Marginata by itself, and those with spreading filaments and non-undulated corolla, under the name of Ammócharis; i. e. *delight of the sandy plains, in which they are chiefly found.* Mr. Ker has been desirous of resting the distinction of Brunsvigia solely on the elongation of the peduncles and increasing width of the upper part of the capsule, without reference to the corolla; and I should have been very glad if I could have found that feature coincide with others of greater importance; but there is a disposition in many of the Amaryllideæ to elongate their peduncles: I have seen them greatly prolonged in Vittata, as well as Cyrtanthus Angustifolius *(Bot. Mag.)*; in Crinum Capense very much; in C. Erubescens occasionally to more than an inch, though usually its capsule is almost sessile; and in C. Flaccidum to more than four inches. C. Revolutum, from being almost sessile, acquires a peduncle an inch long; and in many others this habit is observable. It is therefore a feature upon which no sure dependence can be placed as a generic distinction. But, in this case, though most of the plants united in the Bot. Mag. and Reg. under the name of Brunsvigia, have a striking disposition to it, it could not be adopted as the boundary of the genus without the obvious inconsistency of throwing out of the genus Josephinæ (which produced seeds that germinated in Mr. Burchell's garden without a prolonged peduncle or an attenuated capsule, but with a conformation exactly similar to that of A. Belladonna and Blanda, as may be seen by reference to his drawings) and Coranica (which bore seeds from which bulbs were raised in the same collection, without elongating its peduncles), and thus separating Coranica from Falcata, though the most skilful observer cannot distinguish the two species except by the inflorescence or capsule; and Josephinæ from Multiflora, of which the blossom is strikingly similar. I do not mean to assert that Josephinæ and Coranica may not sometimes elongate their peduncles, which I think very probable, but merely to show the uncertainty of the feature. The elongation and greater divarication of the peduncles appears to take place most decidedly in the species which have the most numerous flowers, as Toxicaria with upwards of 100, and Ciliaris with more than 200 flowers; and I have known the elongation of C. Erubescens occur in the centre flower when the umbel had more than its usual number, appearing to be a resource of nature, to give room for the capsules; on which account the divarication also takes place in Hæmanthus. It will be found that B. Radula, from the want of tube, approaches to the genus Nerine; but the two broad recumbent leaves, the wide short spathe, the obovate germ, the bending of the peduncle, the petals not undulated, and the obtuse stigma, send it back to the group of Brunsvigia. Lucida (Am. Laticoma, Bot. Reg.), in its rounder germ, approaches to the genus Nerine, and in its leaves and time of flowering to Ammocharis Falcata; but those points alone do not appear sufficient to justify its erection into a genus by itself, especially as Josephinæ differs quite as much from the other Brunsvigias, both in leaf and germ: and, on reference to the fine specimens in Mr. Burchell's herbarium, I find that Lucida has a tube one fourth of an inch long, like B. Striata; which, as well as its non-undulated petals in posture like those of B. Radula, its bent peduncles, and its stigma (which is very shortly lobed, and not deeply trifid, like Nerine), send it likewise to the genus Brunsvigia. I have found it absolutely necessary to detach altogether Am. Marginata of Jacquin, on account of the anomalous features it presents. It has the tube, spathe, foliage, stigma, and germ of Brunsvigia; the form, colour, and posture of the limb of the coroll, and the posture of the germ and filaments, like Nerine Curvifolia. The smell is fetid, which is peculiar to itself; and it cannot be placed in any of the other genera without confounding the distinctions of all. I have given it the name of Imhofia, which was originally applied by Heister to Sarniensis; but I believe it was never adopted, nor any definition of the genus given by him. If I had been originally aware of his name, I would have taken it at first for the group to which Sarniensis belongs instead of Nerine; but, as the name Nerine has been used in the Bot. Mag. and Hort. Trans. and the definition and particulars of the genus detailed, I think it will be much more convenient to cultivators and botanists to retain Nerine as I have used it, and to transfer Heister's dormant name Imhofia to the nearly-allied Marginata. If I am wrong in taking this liberty with his Imhofia, for the convenience of the public, those who object to it may transpose the names, and refer Nerine to Marginata.

The genus Nerine exhibits a diversity of coroll between some of its species which have the germ, petals, and filaments bent and distorted, and others in which they are more regular; but I do not consider them separable on that account, because the bending does not seem to be a regular curvature in the construction of the peduncle, but a distortion of the flower in consequence of a premature attempt of the ovules swelling in the upper cell to burst the valve, in consequence of which the under side of the germen, which subtends the angle of the upper cell, is forced downwards, and the flower distorted. I have seen a distortion nearly similar occasioned in Curvifolia, of which the coroll is usually regular, by the swelling of a larger seed than common; and the coroll of Undulata sometimes remain regular when the plant was weakly and not disposed to bear; and I find in the mules from Undulata, of which the ovules are imperfectly formed, no distortion of the flower or declination of the germ. In every other important point the several species perfectly agree. I am told that in some foreign catalogue the name Loxanthus has been given to the Nerines with petals curved upwards, intending to include Lucida and Radula; but, for the reasons just stated, they could not be included without breaking down the divisions by which this and the foregoing genera are distinguished, and confounding them all with Amaryllis again. If such a genus were established, it must therefore be confined to Flexuosa, Humilis, and Undulata; and I have already pointed out that I do not think that separation expedient.

I see no other mode by which these bulbs can be distinctly arranged. If the habit of elongating the peduncle more than usual, were taken as the fundamental generic feature, without regard to the filaments, stigma, and coroll, the species excluded by that uncertain feature would remain in a chaos, from which they could not be extricated. If, on the other hand, a division were attempted according to the posture of the petals only, confining Brunsvigia to Multiflora, Josephinæ, and Striata; uniting Radula and Lucida with Humilis, Flexuosa, and Undulata, and adding Marginata to Curvifolia, Corusca, Sarniensis, and Rosea; we should intermingle the non-undulated petals and obovate germ, the broad leaves and spathe of Brunsvigia in three several genera, and introduce the tube into two genera to which it should not belong; each of which would thus afford anomalies as great and more abrupt than would be found in the whole group of those genera, if united under one character, as Amaryllis, which would stand thus:

AMARYLLIS,

Including Ammocharis, Brunsvigia, Imhofia, and Nerine, under one character with Belladonna and Blanda.

Bulb round, or ovate, or oblong-ovate. *Leaves* bifarious, generally later than the scape (except in Lucida, Falcata, and Coranica). *Scape* with from six to above 200 flowers. *Germ* triangularly round or inversely ovate, continued from the peduncle or bent downwards. *Petals* equal or alternately equal, undulated or not, more or less patent with reflex points, or bent upwards. *Filaments* adhering to the base of the petals, those attached to the inner a little higher, of alternate lengths, curved, or occasionally curved. *Tube*, or *short nectarious cavity*, with the sides equal and not abbreviated underneath, as in Hippeastrum. *Stigma* either obtuse, or 3-lobed, or trifid. *Capsule* 3-valved, 3-furrowed, 3-celled, usually burst by the growth of the seeds. *Seeds* fleshy, irregularly round or oval, often angular by contact, pearl-coloured or green, sometimes becoming purple on the side exposed to the light.

The principal objections to such a comprehensive definition would be, that it would include a greater diversity in the number of flowers and appearance of the coroll, germ, leaves, and seed, than occurs in any other genus of the same family; and that the posture of the germ, in consequence of the bending of the peduncle, appears to be a steady and important feature amongst the Amaryllideæ (and with reason, because it appears to influence the filaments; and also because a germ on a straight peduncle may become sessile in some particular species without disturbing the character, which cannot be the case with a bent peduncle): and it seems that this African group contains a chain of genera approaching to each other, but divisible in the manner I have proposed. My only doubt with respect to the subdivision, is whether Radula and Lucida, of which I have not seen the flowers in a fresh state, are not both anomalous plants, which ought to stand apart from Brunsvigia and single; but I am unwilling to multiply names, and without more perfect knowledge of their inflorescence and fructification, I cannot venture to detach them. The idea that the dropping of the peduncles into a more spherical posture belongs peculiarly to the bulbs called Brunsvigia in the Bot. Reg. is erroneous. On reference even to the plate of Amaryllis Blanda, Bot. Mag. 1450, the same habit will be perceived; for the faded flowers in the umbel there represented, had certainly not expanded with the downward slope into which they afterwards fell to make room for the later buds. All the species of the foregoing genera are confined to the South of Africa, unless Sarniensis be really indigenous in Japan, which I do not believe, because it is very unlikely that one species of a large group, which is otherwise local, should be found both amongst its congeners and in a remote insulated situation. I am confirmed in the idea which I suggested, that Thunberg had confounded it with Lycoris Radiata, by discovering a specimen of Radiata from Japan in Mr. Lambert's herbarium.

Of the African species with fleshy seeds, there remains only to consider the plants which I have detached from the genus Amaryllis and added to Crinum. Mr. Lindley has stated in his Coll. Bot. article A. Vittata, that I have done so injudiciously, but he has assigned no reasons, excepting an assertion, which I am persuaded on mature consideration he will have the candour to retract, that Pancratium is more nearly allied, than the Amaryllides in question, to the genus Crinum, in which I have placed them. I can bring to mind but one point* of agreement between Crinum and Pancratium, in which the Amaryllides added to Crinum differ, viz. the slender proportion, and consequently reflected or pendulous habit of the petals, which are too narrow to support their length. To this may be added, the diverging posture of the filaments, in consequence of the wider expansion of the petals by which they are drawn apart. On the other hand, I can point out about fourteen important points of agreement between those plants and the rest of the genus Crinum, in which they differ from the occidental fleshy-seeded division of Pancratium, by which (if at all) they must be connected.

1. Leaves multifarious, excepting one species, which is not however perfectly bifarious.
2. The same leaves shooting again after the bulb has been dried.
3. The buds inclining or nodding before expansion (unless the division or genus, to which P. Nutans, Amancaes, and Calathinum belong, have a similar habit.
4. The decay of the dissepiments within the capsule.
5. The seeds never prematurely bursting the capsule outwardly.
6. The capsule not having valves, but rotting when ripe, and bursting at random and often crossways.

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* I am aware of an appearance somewhat similar in the knobbed base of the filaments in C. Erubescens and P. Illyricum; but the division of Pancratium, to which that species belongs, is widely separated from Crinum by its black-shelled seeds, and Am. Longifolia var. longiflora of the Bot. Reg. has also knobbed filaments.

7. The similarity of the seeds, which are unlike those of Pancratium.
8. The tube in some species persistent, which is always perishable in Pancratium.
9. The tendency of the points of the filaments to bend upwards.
10. The insertion of the filaments and absence of the cup, and of course of the occasional adhesion of the petals to it, as in P. Litorale.
11. The germ being in several species pedunculated, which in the fleshy-seeded occidental Pancratiums is always sessile. I do not speak of the very distinct genera included under the name by Ruiz and Pavon.
12. The form, posture, and attachment of the ovules.
13. The pollen, of which the particles are rough and adhesive in that division of Pancratium.
14. The stigma triangular or 3-lobed, and fimbriated on the top, instead of round and circumfibriated.

The new species differ perhaps in having the alternate filaments thicker.

The first eight of those corresponding features also distinguish the bulbs I have added to Crinum from the original Amaryllis of Linnæus, Belladonna, and its real congeners; to which eight may be added,

9. The germ widest in the middle, instead of being wider at the upper extremity.
10. The tube slenderer instead of wider than the germ.
11. The greater proportional length of the tube.
12. The flowers not appearing before the leaves.
13. The filaments, which adhere to the outer petals, not being joined by a web to the base of the inner petals.

Other points of agreement with Crinum separate them still more widely from the occidental bulbs which I have heretofore called Amaryllis, but in deference to the type of Linnæus, propose now to call Hippeastrum or Knight's-star-lily. No. 12 is but partly applicable here.

14. Germ straight, and not declined from a curved peduncle.
15. Tube continued straight from the germ and not declining, that is to say, not set on with a slope.
16. The mouth of the tube straight, instead of slanting in consequence of the abbreviation of the lower side.
17. Alternate (though with some capricious irregularity), instead of regular fourfold diversity of petals and filaments.
18. Nearly equal alternate, instead of fourfold insertion of filaments.
19. The filaments not lying in the channel of the lower petal.
20. The scape and peduncle solid instead of hollow.

I apprehend, therefore, that no person who applies an unprejudiced mind to the subject can think that the bulbs which I have added to Crinum ought to continue attached to either the genus Amaryllis, as founded upon Belladonna, or to the occidental bulbs which I now call Hippeastrum. The only question, therefore, must be whether they properly unite with Crinum, or should rather form a genus by themselves. It must not be overlooked that A. Longifolia (my C. Capense) breeds as freely from the impregnation of any Crinum according to the old definition, as from its own pollen; that we have already obtained mule seedlings or seed from that plant, by Toxicarium, Brevifolium, Pedunculatum, Canaliculatum, Erubescens, Cruentum, Defixum, and Lorifolium [*], besides three intermixtures between the tropical species I have added to Crinum, and bulbs of the old family. When, therefore, the facility with which they breed together (refusing, as far as we have tried, to cross with any other genera), is considered, in addition to the many points of agreement above detailed, I think it will be admitted that there is a strong primâ facie case in favour of my arrangement, and that at least it ought not to be disposed of as injudicious, without much stronger reasons than the observation concerning the affinity of Pancratium, which I trust I have shown to be inaccurate; and it would seem to me preposterous to propose dividing the genus on account of some trifling feature of variation, and annoying the public by a new coinage of additional names upon such insignificant grounds. I have, however, divided the genus Crinum into two sections, and those sections into subdivisions; and I think a view of the manner in which the divisions of the two sections cross each other, will show the propriety of considering the whole as one genus.

1st Section	*Patentes*	*spread-flowered.*
1st Subdivision	Nutantes	buds nodding.
2d Subdivision	Inclinatæ	buds inclined.
2d Section	*Semipatentes*	*half spread.*
1st Subdivision	Ornatæ, or nutantes	buds nodding
2d Subdivision	Longifoliæ, or inclinatæ	buds inclined.

There is a doubt whether Linnæus's A. Ornata was C. Broussoneti (Bot. Mag.), or my C. Yuccæides. The specimen in the Banks. Herb. from Kew bearing date only three years after the name was given by the younger Linnæus in this country, appears to be Broussoneti, and Yuccæides of the same herbarium to be my Yuccæides. Mr. Salisbury has reasons for thinking he can trace my Yuccæides through the Marquis of Rockingham's collection to be Linnæus's Ornata; but, as the name Ornata has been applied to so many allied species in various works, I think it much best to retain the specific names Broussoneti and Yuccæides, and to give the name Ornatæ to the group to which they belong. I should recommend the name Ornataria, formed from Ornatûs, after the manner of Sanguinaria and Crotalaria, to those who think it deserves to be erected into a genus by itself, to which I am decidedly adverse.

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[*] Not exactly Lorifolium, but a plant sent from Calcutta under that name, appearing to be an accidental mule between that plant and Defixum.

It is said that the plants which, agreeing with Dr. Roxburgh, I have added to the genus, and which form its second section, differ from the former in having irregular corolls and bent filaments; but the fact is not exactly so. There is a disposition to an alternate, though not very regular, inequality of the petals (the inner being the widest) throughout the whole genus, and the alternate inequality is greater, perhaps, in no species than in C. Erubescens var. major. In the broader and shorter petals the capricious irregularity of their width becomes more conspicuous, and perhaps in some, particularly C. Zeylanicum, it may be proportionably greater. I have observed that in the Ornatæ, which have the tube most bent, the upper petals and filaments (principally the upper inner petal and filament) are generally of inferior dimensions, perhaps in consequence of their nourishment being checked by the bend of the tube; but this variation does not appear reducible to any certain rule. Throughout the whole genus the filaments attached to the widest petals are rather the longest, and the filament belonging to a petal of unusual width seems generally longer than those which should correspond with it: but all these variations seem capricious and uncertain, though subject to the general law, that the outer petals and filaments are the least. Nor is it true that the first and second section are distinctly separated by the bending of the filaments. I do not even consider the upward bending of the point of the filaments to be, of itself, a very important feature amongst the Amaryllideæ; because the fact is, that there is a general disposition in the points of the filaments to aspire, and that their being bent or straight depends mainly upon the posture of the flower; and in the umbels of A. Blanda and Nerine Curvifolia they will be straight in the erect central flowers, and bent in those which are sloped. Conniving anthers afford a much more important feature, because it is of itself a peculiar character, and not the consequence of posture: but the bending of the points is chiefly important when it arises from the invariable slope of the germ from the peduncle or the corolla; and in that case it is the posture that really gives the character to the genus. Amongst all the Crinums, the bending of the points of the filaments appears to be, in a great degree, proportionable to the curvature of the tube, being less in those of which the attitude is more erect; and both the curvature of the coroll and of the filaments is less in a low temperature. The points of the filaments are more bent in C. Americanum of the first section, which nods, than in C. Capense of the second, which only inclines; and as much so even in Toxicarium and Brevifolium. The only features which appear to distinguish the second from the first section, besides expansion, are, that mostly the filaments are alternately thicker, more fasciculate by the downward bending of the upper three, and less knobbed at their point of insertion; and that the margin of the inner petals, which at its base adheres to the filament of the outer petal at the point of insertion, gets stronger hold of it in the broader sorts, because their breadth at the mouth of the slender tube brings the margins of the inner petals in contact with each other, and scarcely leaves room for the filament between them. But the knob to the filaments does not extend through the whole of the first section, and is scarcely observable in Crinum Amœnum; nor does the downward bending of the upper filaments seem to be a distinct feature. In both sections the species of the subdivision that nods have the tube and filaments more bent, the second section having the greatest disposition to bend, but its inclining subdivision not much more than the nodding part of the first section, though the expansion of the petals amongst those draws apart the filaments, and prevents their fasciculation. The reason why the Ornatæ have them most declined and the tube most curved appears to be, that the substance of the whole flower in these species is considerably thicker, and, after having nodded, the tube and filaments do not relax their posture so readily as the more flaccid sorts, but remain bent with an upward direction of the points of the genitals. In those species, by the downward curve of the upper filaments, the hinge is turned the wrong way, marking the petals with a little knob outwardly, and consequently the upper petals expand less than the lower, which are favoured by the downward curve and drop a little. If the less expansion of the petals, the greater curvature of the tube and filaments, and the absence of the knob-like appearance at their base always coincided, they might afford something like a generic distinction; but it so happens that those with the greatest curvature have a medium expansion, and that those which expand the least have very little more bend than the first or wide-spreading section; and, as if placed on purpose to defeat any division, stands amongst those with the very least expansion C. Longiflorum (called in the Bot. Reg. a variety of Am. Longifolia), having filaments knobbed like C. Erubescens, a straight tube, and its filaments erect and not fasciculate, and its petals not so wide as the largest variety of Erubescens. The figure in the Register is very inaccurate: I have carefully examined the flowers of Mr. Griffin's very plant from which it was made, and I find the breadth of the inner petals hardly $\frac{6}{8}$, and of the outer $\frac{5}{8}$ of an inch; the colour of the lower part of the limb almost white, of the upper part blush pink, rather deepest on the outside. The scape should have been reddish brown, and the germs not of such deep green; the peduncles $\frac{3}{4}$ of an inch long. The cells, which in C. Capense (A. Longifolia) have about 31 ovules, in C. Longiflorum have only 11 when full, some only 9 or 10. The filaments and cells mark that it is not a variety of C. Capense. Its native place is not ascertained, and if its ovules had not been apparently very perfect, I should have thought it a natural mule, between Capense and Erubescens. It is scarcely distinguishable in foliage from the artificial mules of that origin, which have not yet flowered. I believe that, with the exception of Longiflorum, the species of the 2d § will be found to have the alternate filaments a little thicker.

I have sedulously sought for some further distinctions by which the subdivisions might be characterized, and it will be observed that the peculiarities of the different groups cross each other in the two sections, which is important to show that the whole forms one genus; and it is possible that some of the less known species may be found to depart from the subordinate distinctions stated concerning the subdivisions. It will be seen that, for the most part, in both sections the pedunculated species only incline the bud, and the sessile or subsessile nod; that in one section the pedunculated, in the other the sessile, have non-undulated leaves. Any generic division, by the number of ovules in the cells or the form of the bulb, is defeated by the absence of any corresponding peculiarities. Of the first section, some have 1-seeded, some 2-seeded, some 4-seeded, Amœnum 5, and, according to Roxburgh, Longifolium many-seeded cells.

Of the second, some have perhaps 2-seeded, Flaccidum about 7-seeded, Scabrum 14, Longiflorum 11, and Capense 31-seeded cells. Crinum Revolutum is stated, in the Bot. Mag. 1178, on the authority of Jacquin Am. Variabilis, to have 1-seeded cells. Jacquin, however, merely says *seeds green,* and the error appears to have arisen from the seed represented in the plate being nearly of the size and shape of one cell of the capsule; but it frequently occurs that only one Crinum seed swells in a cell or capsule, and the other ovules remain abortive. Crinum Revolutum is probably many-seeded, but I have had no opportunity of examining its germ. I have observed the filaments visibly continued or decurrent in the upper part of the tube of Crinums in all the subdivisions, which therefore agree in that feature.

Having thus disposed of the African species with fleshy seeds, I come to A. Purpurea, which in the Bot. Mag. 2113, I referred to Cyrtanthus (or rather to Cyrtantheæ, by which I mean those African genera which have seeds with a black shell and foliaceous margin, and the upper part of the tube wide and not closely embracing the style), without intending then to enter upon the consideration of a further subdivision. I cannot find any true species of Cyrtanthus, except Obliquus, on which the genus was founded. A. Purpurea stands by itself, and I have used the generic name Vallota, which I am told is adopted in some French Catalogues from a paper by Mr. Salisbury. To the smaller species, included under Cyrtanthus (excepting Uniflorus, Bot. Reg.), I apply the name Monella, given to one or two of them by Mr. Salisbury, who, as I understand, makes further subdivisions for which I do not find sufficient cause.

The shelly and foliaceous seeded occidental Amaryllides agreeing with Equestris, to which as a large group I had originally wished to preserve the name Amaryllis, I have named Hippeastrum or Knights-star-lily, pursuing the idea which gave rise to the name Equestris; as it appears expedient to retain the Linnæan name to Belladonna, especially as the boundaries between the African Amaryllis and Brunsvigia are so slight, that some botanists may perhaps think them insufficient. The very different nature of the seeds separates at once Hippeastrum, as well as the Cyrtantheæ, from the African Amaryllis and the genera connected with it.

A singular notion has been adopted by Mr. Ker, that Amaryllideæ sometimes bear one sort of seed and sometimes another. I can say, that after many years attention to their cultivation, I have never seen the slightest variation take place; and it would not seem to me more probable that a fowl should sometimes lay a duck's egg, or gooseberry bushes be loaded with peaches. The notion seems partly to have arisen from a plate in Jacquin, which gives two seeds of Brunsvigia Striata, one green and one blackish*. But the colour is not the point in question; the green seeds of Nerine become purpurascent where exposed to the sun, and in some cases seeds of that kind may perhaps become entirely dark-coloured. But the seeds of all Crinums of both sections, as well as those of Nerine, &c. consist of a fleshy substance like the eatable part of an apple, which has no separable shell, and decays altogether. The seeds of Hippeastrum have two integuments; the outer black shell may be stripped off from the internal white membrane, and will remain under ground for a year or two without rotting after the kernel has perished or vegetated. In seeds of Hippeastrum, the deposit by which the embryo is to be nourished, remains in a liquid state within the inner membrane till the hour of perfect maturity; in those of Crinum, though it does not acquire its firm texture before it is mature, it is solid and adheres inseparably to the outer membrane. Such an essential difference in the seed affords a generic distinction paramount to every other consideration. It is singular, that such important features as the fruit, and the insertion of the filaments, have not been particularly attended to in most descriptions of plants of the genera, concerning which I am treating.

Hippeastrum is divided from the Linnæan Amaryllis Belladonna by the following important features.

1. Black shelly seeds with a winged or foliaceous margin.
2. The seeds never bursting the valves prematurely.
3. The oblique mouth of the tube abbreviated on the under side by the deeper division of the petals.
4. The fourfold instead of alternate diversity of the petals.

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* There is, however, no reason but the colour given in Jacquin's figure to one of the two seeds of B. Striata, which he describes as green, for supposing that the seeds of Brunsvigia are ever dark-coloured. Those of Josephinæ, major and minor, are pale green. Those of Multiflora var. rubricaulis, now vegetating before me, as imported from Africa by Mr. Griffin, are like those of Josephinæ. Seeds of the green-stemmed Multiflora, which were ripened in a hotbed by Mr. Griffin, were also green, but larger and irregularly-shaped, like those of Falcata. I do not however imagine them to be always so; for I have seen unfertilized seeds of Nerine Undulata in the stove become monstrous, and the hotbed was likely to favour an unusual deposit of albumen. The account in the Bot. Mag. that the seeds of B. Multiflora have a black shell, is certainly erroneous. Mr. Burchell recollects having seen them lying like green peas on their native sands. The seeds of B. Striata, represented by Jacquin, are a little pointed at one end, like the seed out of a grape.

5. The fourfold instead of alternate insertion and length of the filaments.
6. The nectarious beard or screen in several species.
7. The germ being set on in a different direction from a hollow peduncle.
8. The tube being set on in a different direction (that is sloped) from the germ.
9. The constriction of the germ in the middle.
10. Flower stems successive at various seasons (occasionally two simultaneous), and not regularly forerunning the leaves in the autumn.

The beard or screen, in some species, at the mouth of the tube, is evidently an imperfect prolongation of the membrane, which in all the species connects the petals into a tube. It furnishes perhaps a sure distinction of the species, but the fundamental structure which defines the genus is the same in all. I should have considered Rutilum as a variety of Fulgidum, if I had not discovered a minute knob in Rutilum at the base of the upper petal, which is evidently an imperfect attempt to produce the screen, and would alone be sufficient to show the fallacy of any generic separation, founded on trifling modifications of the termination of the membrane. It is very likely that the knob may not even be visible in all specimens of Rutilum. In the mules from Vittatum by Rutilum, the beard is very faint, and in some of the seedlings not discernable without close inspection.

The genus Coburgia, consisting of A. Reticulata and Striatifolia, which are perhaps only varieties of one species, is separable from Hippeastrum only by its germ not being widened at the upper extremity, the ovules fewer and triangular, and the seeds round or pea-shaped, without a foliaceous margin. In the Bot. Mag. I had expressed a doubt whether they did not agree with Belladonna, but my recollection of the flower and seed was imperfect; and, from the arrangements of the editor, the plate and description of Striatifolia could not have been delayed, as I had wished, for the purpose of re-examining the flower. It is totally distinct from the genus to which Belladonna belongs, and the circumstance of mule seedlings having been produced at Colvill's nursery from two species of Hippeastrum impregnated by its pollen, makes me very desirous of examining its seed more minutely, which I have not had in a perfect state lately, and ascertaining more exactly the particulars of its difference from that of Hippeastrum. The perfect conformity of the male part and corolla, might however be expected to favour the production, however rare, of a bigeneric mule.

The * denotes the several species in my collection.

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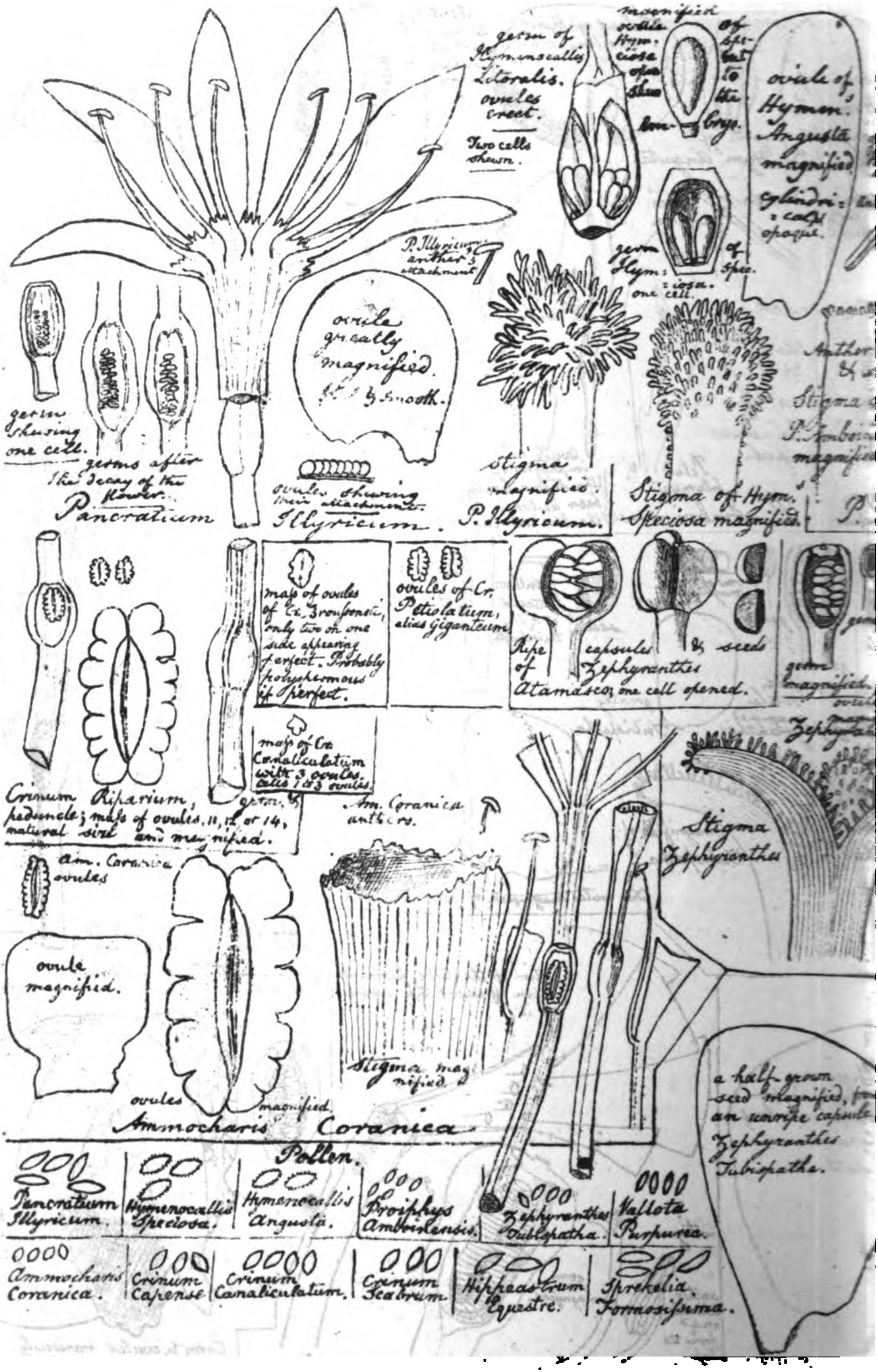
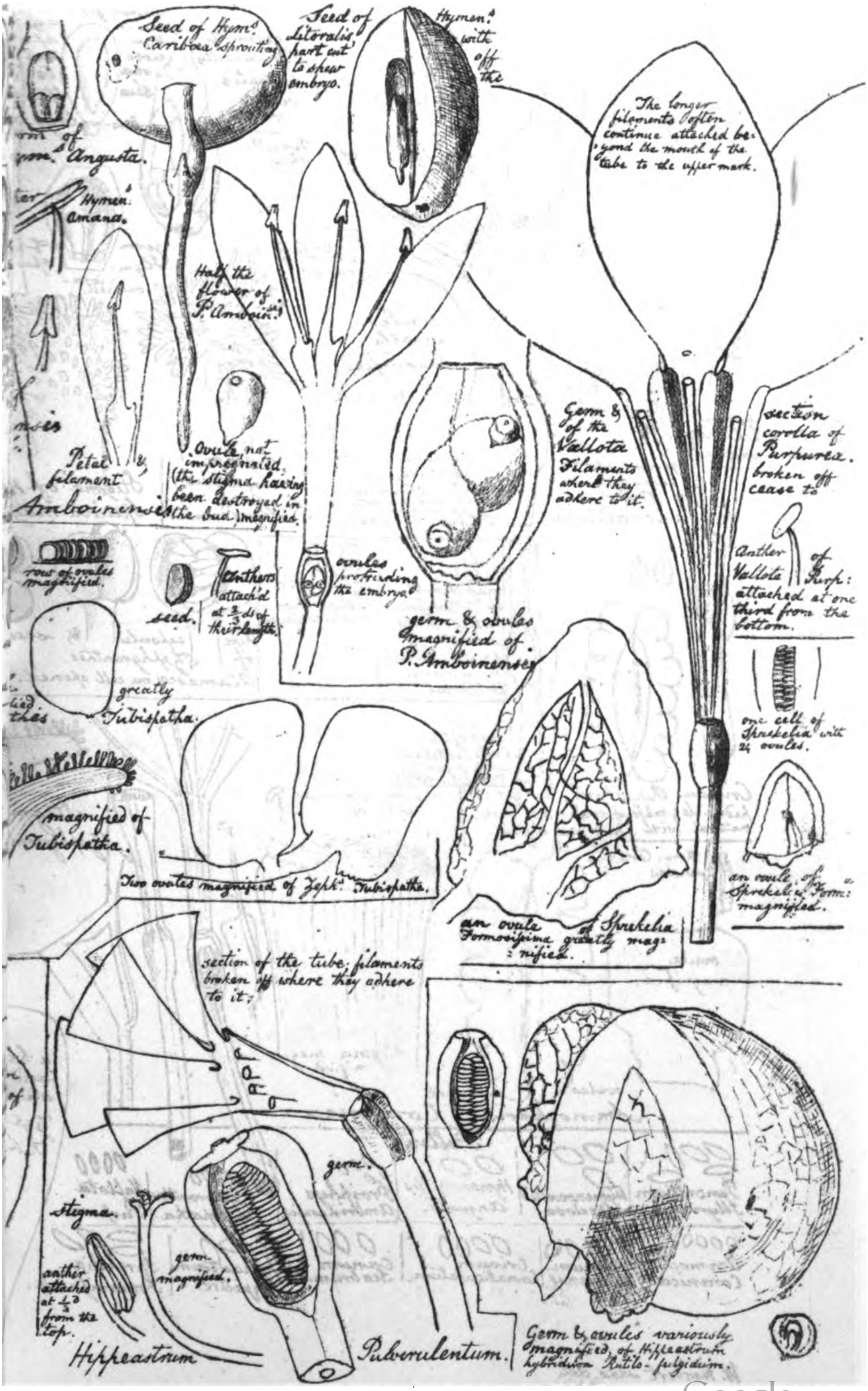


W. Herbert saxo del.


Seed of Hymn^s Caribœa sprouting
Seed of Litoralis part cut to shew embryo.
Hymen^s with off the
orm of ymn^st Angusta.
ter Hymen^s Amana.
Half the flower of P. Amboin^si
The longer filaments often continue attached beyond the mouth of the tube to the upper mark.
Petal & filament
Ovule not impregnated (the stigma having been destroyed in the bud) magnified.
Amboinensis
Germ & of the Vallota Filaments where they adhere to it.
section corolla of Purpurea. broken off cease to
Anther of Vallota Purp: attached at one third from the bottom.
rows of ovules magnified.
seed.
Anthers attach'd at 2/3 ds of their length.
ovules protruding the embryo.
germ & ovules magnified of P. Amboinensis
one cell of Sprekelia with 24 ovules.
greatly Tubispatha.
magnified of Tubispatha.
Two ovules magnified of Zeph^s Tubispatha.
an ovule of Sprekelia Formosissima greatly magnified.
an ovule of Sprekelia Form: magnified.
section of the tube: filaments broken off where they adhere to it;
germ.
stigma.
anther attached at 1/3 from the top.
germ magnified.
Hippeastrum Pulverulentum.
Germ & ovules variously magnified, of Hippeastrum hybridum Rutilo-fulgidum.

A TREATISE

&c.

AMARYLLIS.

Bulbus ovatus. ***Folia*** 14 vel ultra, hiemalia aut verna, æstate dereuntia. ***Scapus*** altus, præcox, autumnalis. ***Umbella*** sub-20-flora. ***Flores*** odori. ***Pedunculi*** divaricati. ***Germen*** trigonè sub-turbinatum aliàs obovatum, pedunculo directè continuatum. ***Tubus*** infundibuliformis, filamentis et membranâ filamenta jungente compactus, laciniis tubo adnatis, exterarum verò marginibus usque ad basin imbricantibus, ita ut laciniis exteris dereptis tubus integer maneat. ***Limbus*** patenter infundibuliformis. ***Laciniæ*** undulatæ, alternæ æquales. ***Filamenta*** casu recta vel assurgenter curvata, temere petalo exteriori vel interiori vel inter duo recumbentia, tria imâ parte crassiora laciniarum interiorum basi, tria breviora et tenuiora infra lacinias exteriores tubo adnata. ***Stigma*** trilobum superne fimbriatum. ***Stylus*** declinatus. ***Capsula*** trisulca, trilocularis, trivalvis. ***Loculi*** 6-14 ovulis. ***Ovula*** rotunda, duobus ordinibus posita. ***Semina*** magna, carnosa, globosa, nitida, capsulam crescendo rumpentia, colore margaritaceo parte solari purpurascentia. ***Patria*** Africa meridionalis. ***Species.***

* 1. Belladonna. *Bot. Mag.* 733.
* 2. Pallida. *Redouté.* Vel Belladonna *var.* pallida.
* 3. Blanda. *Bot. Mag.* 1450.

Bulb egg-shaped. ***Leaves*** 14 or more, produced in the winter or spring, perishing in summer. ***Scape*** tall, autumnal, rising before the leaves. ***Umbel*** under 20-flowered. ***Flowers*** fragrant. ***Peduncles*** diverging variously. ***Germ*** nearly turbinate or inversely egg-shaped, but with three angles, continued straight from the peduncle. ***Tube*** funnel-shaped, formed by the filaments and a membrane which unites them, the petals adhering to the tube, but the margins of the outer petals over-lapping the tube, so that it remains entire when they are stripped off. ***Limb*** wide funnel-shaped. ***Petals*** undulated, alternately equal. ***Filaments,*** according to the posture of the flower, straight or bent upwards, lying at random upon an inner or an outer petal, or between two: three thicker than the others near the base attached to the base of the inner petals, three slenderer and shorter attached to the tube below the adhesion of the outer petals. ***Stigma*** 3-lobed, fringed on the top. ***Style*** a little bent. ***Capsule*** 3-furrowed, 3-celled, 3-valved. ***Cells*** with 6-14 ovules. ***Ovules*** round, in two rows. ***Seeds*** large, fleshy, round, smooth, bursting the capsule as they grow, pearl-coloured, becoming purple where exposed to the sun. ***Country*** S. Africa. ***Species:*** 1. Belladonna; 2. Pallida; 3. Blanda. ***Culture.*** These bulbs like a strong loam, and do not object to liquid manure from the farm-yard, and are hardy; but the severity of the winter in this country delays the growth of their leaves and injures their points; and the wetness of the summer, added to the lateness of their shoot, generally prevents them from going to rest early enough to produce their blossom in the autumn, in which case it is thrown out abortive in the spring. The easiest way of flowering them in this climate is to keep them in pots, which may be placed under a close glass frame in August till they flower, and afterwards plunged in the open border; or the pots may be kept in an airy greenhouse in the winter, and placed in the stove without water at Midsummer.

BRUNSVIGIA.

Bulbus ovatus aut rotundus. *Folia* 2-14 vel ultra, hiemalia æstate depereuntia. *Scapus* brevis, autumnalis, plerumque præcox. *Umbella* sub-80 flora. *Spatha* bifida, lata, brevis. *Pedunculi* divaricati. *Germen* trigonè turbinatum vel obovatum, pedunculi flexu declinatum. *Tubus* cylindraceo-sub-infundibuliformis, exterarum laciniarum marginibus summo tubo imbricantibus; (in B. Radulâ tubus sub-nullus sed margines imbricantes). *Laciniæ* non undulatæ, assurgenter curvatæ, alternæ sub-æquales. *Filamenta* sursum curvata, tria laciniarum basi, tria vix infra basin tubo adnata. *Stylus* sursum curvatus. *Stigma* obtusum, trigonum. *Capsula* recta, 3-sulca, 3-locularis, 3-valvis. *Loculi* ovulis paucis. (*Ovula* uno ordine alternatim conserta?) *Semina* parva, rotunda vel oblongo-ovata, integumento viridi non separabili; (parte solari purpurascentia?) *Patria* Africa meridionalis. *Species.*

Præcoces.

* 1. Multiflora. *Bot. Mag.* 1619.—Heist. Mon.
* –. var. rubricaulis, margine foliorum lævi. *A. Orientalis.* Jacq. H. Sc.
* 2. Josephinæ. *Redouté.*
–. var. minor. *Bot. Reg.* 192, 193. In Mr. Griffin's Collection.
*? 3· Striata. *Jacq. Hort. Sch.*—Specimen in Herb. Banks.
4. Radula. Ib. Specimen ib.

Foliis æstivis, flore tardivo.

* 5. Lucida. *Bot. Reg.* 497. A. Laticoma. *Bot. Mag.* 2124, *p.* 2. Nerine.

Bulb egg-shaped or round. *Leaves* 2 to 14 or more, growing in the winter, dying in the summer. *Scape* short, generally before the leaves, autumnal. *Umbel* under 80-flowered. *Spathe* 2-cleft, broad, short. *Peduncles* diverging variously. *Germ* triangular, turbinate or inversely ovate, declined by the bending of the peduncle. *Tube* between funnel-shaped and cylindrical, the margins of the outer petals over-lapping the upper part of it. (In B. Radula scarcely any tube, but the margins over-lapping.) *Petals* not undulated, bent upwards, the alternate nearly equal. *Filaments* bent upwards, three adhering to the base of the petal, three just below their base to the tube itself. *Style* bent upwards. *Stigma* obtuse, triangular. *Capsule* straight, 3-furrowed, 3-celled, 3-valved. *Cells* with few ovules. (*Ovules* alternately blended into one row?) *Seeds* few, round or oblong-ovate, with a green integument which is not separable (purpurascent by exposure to the sun?). *Country* S. Africa. *Species. Flowering before the leaves.* 1. Multiflora. 1 var. 2. Red-stemmed Multiflora. *Jacq.* 2 Josephinæ. 2 var. 2. Minor. 3. Striata. 4. Radula. *Species flowering with the leaves.* 5. Lucida. *Culture.* This genus is more delicate than Amaryllis. The bulbs rot more easily (unless, perhaps, that of Josephinæ) and require more decided drought after the decay of the leaves; and if the leaves were injured by frost, they would not push freely, as those of Amaryllis do afterwards. They should be kept quite dry in a warm situation under glass, when at rest before their autumnal blossoming, and plentifully watered and placed in an airy greenhouse while the leaves are growing in the winter. A good loam suits them, keeping the neck of the bulb above ground. Josephinæ, which has a great affinity to Amaryllis Blanda, will thrive in very strong soil. Lucida, which has a very different habit, requires to be left drier in the winter and its growth encouraged in the summer months: and it appears to prefer a sandy loam, *Observ.* Mr. Griffin has received with the bulb of Multiflora var. Rubricaulis, which is perhaps a distinct species, a fine specimen with about 70 capsules, which were full of seeds, mostly ripe and sprouting. In an unripe capsule I find about 14 ovules in a cell alternating from the two sides into one row. Those of Josephinæ Major are represented in the same posture by Mr. Burchell.

AMMOCHARIS.

Bulbus sphæricus vel ovatus. *Folia* hieme depereuntia, eadem vere repullulantia. *Scapus* æstivus. *Umbella* sub-40-flora. *Pedunculi* plùs minùs trigoni, divaricati. *Germen* trigonè turbinatum vel obovatum, pedunculo directè continuatum. *Tubus* trigonè cylindricus fauce ampliore, marginibus non imbricantibus, sex-costatus. *Laciniæ* non undulatæ, subpatentes apicibus reflexis, non assurgenter curvatis, alternæ subæquales. *Filamenta* patentia, secundum floris posituram recta aut vix curvata, pariter fere ad laciniarum basin tubo adnata, alterna subæqualia. *Stylus* eàdem ratione rectus aut vix curvus. *Antheræ* breves, medià fere parte filamentis affixæ. *Pollinis* vesiculæ Crini polline plùs dimidio minores. *Stigma* simplex. *Loculi* ovulis 6-16. *Ovula* biseriatim latere toto placentæ intermediæ adnata. *Semina* carnosa, integumento viridi non separabili (in Falcatà quæ vidi difformia). *Patria* Africa meridionalis. *Species.*

* 1. Coranica. Bot. Reg. 139.

* 2. Falcata. Bot. Mag. 1443.

Bulb spherical or ovate. *Leaves* perishable in winter, but the same sprouting again in the spring. *Scape* rising before the leaves. *Umbel* under 40 flowered. *Peduncles* more or less triangular, diverging. *Germ* triangularly turbinate or obovate, continued straight from the peduncle. *Tube* triangularly cylindrical a little widened at the mouth, the margins of the petals not lapping over, six-ribbed. *Petals* not undulated, more or less widely expanded, with the points bent backwards but not curved upwards, the alternate nearly equal. *Filaments* spreading, straight or a little curved, according to the posture of the flower, adhering to the tube at the base of the petals nearly at the same point, the alternate of about equal lengths. *Style* in the same manner straight or a little curved. *Anthers* short, attached about the middle to the filaments. *Particles of pollen* not half so big as those of Crinum. *Stigma* undivided. *Cells* with from 8 to 16 ovules. *Ovules* in two rows, adhering by one whole side to the placenta lying between them. *Seeds* fleshy, with a green integument which is not separable (those which I have seen of Falcata, irregularly shaped). *Country* S. Africa. *Species.* 1. Coranica. 2. Falcata.—*Culture.* A moderately light loam will be found to suit the plants of this genus, the neck of the bulb being kept above ground. The very light soil in which they generally grow in Africa, would require such a frequent supply of water in the summer time, that it would be found inconvenient, and subject the plants to accidental checks. They should be left quite dry, and placed in a warm situation in the winter; well watered and removed into a cooler and airy place in summer. A hot-bed is sometimes used with success to promote their flowering. In Falcata I have found the cells from 6- to 8-seeded in two rows; in Coranica 15- or 16-seeded. The inspection of the germ of Coranica, sent to me by Mr. Burchell since the engraving was made of the germs of Toxicaria and Ciliaris, and the foregoing pages printed, has decided the separation of those two plants which I had intended to place as a 2d § of Ammocharis. The ovules of Coranica, like those of Crinum, adhere inseparably by one whole side to an intermediate body or placenta. Those of Toxicaria and Ciliaris are separately attached, closing from two threads, instead of diverging from an intermediate mass, which I consider a decisive generic feature. I have not examined the pollen of Falcata, nor its ovules since I have seen those of Coranica and Toxicaria; but I believe they will be found to accord with Coranica, to which the name Ammocharis is given. The germ of Coranica has the same angles as that of Falcata, but they are faintly marked, and on the peduncle become almost obsolete. I have never seen the ripe capsule of either: by the engraving in the Bot. Mag. that of Falcata appears not to open by valves as Brunsvigia, but to burst irregularly as Crinum.

BOOPHANE.

Bulbus oblongo-ovatus. *Folia* annua. *Scapus* præcox. *Umbella* 100-230-flora. *Pedunculi* trigoni, confertim suberecti, deim sphæricè divaricati. *Ovula* pauca, discreta, biseriatim alligata, uno ordine plerumque conserta. *Capsula* trigona, trisulca, trivalvis, trilocularis. Cætera ut in Ammocharide, nisi quòd corolla minor est. *Species.*

* 1. Toxicaria; loculis dispermis. *Bot. Mag.* 1217.
–. var. 2. Obtusifolia, magis undulata. *Burchell herb. et tab. pict.*
* 2. Ciliaris. *Jacq. fragm.* et *Specimen in herb. Banks.*

Bulb oblong-ovate. *Leaves* annual. *Scape* rising before them. *Umbel* from 100 to 230 flowered. *Peduncles* triangular, crowdedly sub-erect, afterwards diverging, so as to form a sphærical head. *Ovules* few, distinct, attached in two rows, closing usually into one. *Capsule* with three angles, three furrows, three valves, and three cells. In other respects like Ammocharis, excepting that the coroll is smaller and the stigma more acute. *Species.* * 1. Toxicaria; with 2-seeded cells. 1. var. 2, blunt-leaved, more undulated. * 2. Ciliaris.—*Culture, &c.* The same soil suits Boophane and Ammocharis. Ciliaris is sometimes found in clay in Africa, as well as many sorts of Mesembryanthema, but the evaporation in England is not sufficiently rapid to permit them to thrive in a strong soil with us. It may even be well to place some sharp white sand in contact with the bulb of Ciliaris, which is most liable to rot. Toxicaria will continue growing during the winter in the stove, but without a period of rest I do not think it will flower. Ciliaris seems to prefer pushing its leaves in autumn, and resting, like Amaryllis, in the summer, at which time it should be kept dry, but not too hot, which would cause the bulb to bleed. Bulbs of this and other genera allied to it are often destroyed by the fear of giving as much water as they require while growing, or leaving them as dry as they ought to be when at rest; and the bulbs are annoyed by irregular and capricious watering till they perish. *Observ.* The cells of Toxicaria appear to be regularly 2-seeded, the ovules sometimes one above the other, sometimes jostling.

IMHOFIA.

Bulbus, folia, spatha, ut in Brunsvigiâ. *Scapus* sub-præcox, sub-20-flora. *Pedunculi* suberecti. *Germen* triloculare, trigonè obovatum, pedunculo continuatum. *Flores* fœtidi. *Tubus* brevis, rectus. *Limbus* subundulatus, patentissimè reflexus ut in Nerine. *Filamenta* erecta, fasciculata. *Stigma* obtusum, trigonum. *Stylus* rectus. *Species.* Marginata. *Specim.* in *Herb. Lambert.—Jacq. Hort. Schœnb. Amaryllis Marginata.*

Bulb, leaves, and *spathe* as in Brunsvigia. *Scape* a little before the leaves, less than 20-flowered. *Peduncles* straight and nearly erect. *Germ* 3-celled, obovate, continued from the peduncles. *Flowers* fetid. *Tube* short, straight. Limb rather undulated, wide-spread, with points bent back as in Nerine. *Filaments* erect, clinging round the style. *Stigma* triangular, obtuse. *Style* erect.—Only known by the figure and description of Jacquin, and a specimen in Mr. Lambert's herbarium. *Species.* 1. Marginata.

NERINE.

Bulbus sub-rotundus. *Folia* bifaria, angusta, hiemalia, æstate depereuntia. *Scapus* altus, sub-præcox, autumnalis. *Umbella* sub-20-flora. *Flores* inodori. *Pedunculi* sub-erectè divaricati. *Germen* breve, rotundatè trigonum, pedunculo directè continuatum, aut ovulis in loculo superiore

turgescentibus deflexum unde flos difformior, 3-loculare, loculis 2-14 spermis. *Corollæ* tubus nullus, laciniæ sub-æquales, undulatæ, angustæ, patentes, usque ad germen divisæ, basis medio infra filamentorum junctionem eis adhærentia. *Filamenta* versùs basin latiora, gibbosa, et in nectarium liquore sæpe repletum coalescentia; alterna longiora, nisi casu irregularia; breviora corollæ laciniis exterioribus adhærentia. *Stigma* trifidum, superne fimbriatum. *Capsula* trilocularis, trisulca, trivalvis, difformis plerumque et seminibus immaturis disrupta. *Semina* parva, integumento viridi non separabili, compressione angularia, parte exteriore rotundata, et aliquando sub-purpurascentia. *Patria* Africa meridionalis.

SECTIO 1. REGULARES.

Germine recto; *corollâ* patente; *filamentis et stylo* fasciculatis, rectioribus. *Species.*

1. *Curvifolia. *Bot. Mag.* 725.
2. *Corusca. *Bot. Mag.* 1089.
3. *Rosea. *Bot. Mag.* 2124.
4. *Venusta. *Bot. Mag.* 1090.
   * ——— var. 2. minor.
5. *Sarniensis, alias Venusta, var. 3. *Bot. Mag.* 294.

SECTIO 2. DISTORTÆ.

Germine deflexo; *corollâ filamentis et stylo* sursum curvatis. *Species.*

* 6. Flexuosa. *Bot. Reg.* 172.
* 7. Humilis. *Bot. Mag.* 726.
* 8. Undulata. *Bot. Mag.* 369.
* 9. Pulchella. foliis glaucis. *Sp. inedita.*

Bulb roundish. *Leaves* bifarious, narrow, flourishing in winter, dying in summer. *Scape* tall, just before the leaves in autumn. *Flowers* scentless. *Peduncles* divaricating, with a tendency to be erect. *Germ* short, triangularly rounded, continued straight from the peduncles, or bent downwards by the swelling of the ovules in the upper cell, by which the flower is distorted, with 3 cells, which contain from 2 to 14 ovules. No *tube*. *Petals* nearly equal, undulated, narrow, wide-spread, divided quite to the germ, adhering at bottom by the mid-rib to the united filaments below the point of their union. *Filaments* widened and gibbous near the base, coalescing into a nectary often filled with liquor: the alternate longer, unless irregular by accident; the shorter adhering to the outer petals. *Stigma* trifid, fringed on the top. *Capsule* 3-celled, 3-furrowed, 3-valved, generally irregular in its form, and burst by the swelling of the seeds. *Seeds* small, with a green integument which is not separable, smooth, angular by compression, rounded, sometimes purplish on the back. *Country* S. Africa. Section 1st, with regular flowers: 1. Curvifolia; 2. Corusca; 3. Rosea; 4. Venusta, and do. var. minor; 5. Sarniensis, or Venusta, var. 3. Section second, with distorted flowers: 6. Flexuosa; 7. Humilis; 8. Undulata; 9. Pulchella, with glaucous leaves. *Culture.* The cultivation of this genus has been fully detailed in the Hort. Trans. v. 4, p. 176. They should be potted in light loam, with the necks of the bulbs above ground. The growth of the leaves should be promoted early in the autumn, and while the leaves are growing the pots should be placed in an airy situation and freely watered. They must be sheltered from frost during the winter, with a moderate supply of water, sufficient to prevent the leaves from suffering by drought before the period of rest. From Midsummer till the time of flowering, about the end of August or a little later, they should be kept quite dry, and during that time the bulbs may be examined, the decayed coats and any rotten part of the bulbs removed, and the offsets taken off. In some situations Nerine Undulata flowers pretty well out of doors, but in England the summers are generally too wet to give the proper rest to bulbs of this genus, and the frost too severe to permit their leaves to flourish in due season. The bulbs of this and the foregoing genera, as well as the stemless species of Hæmanthus, require free air and a low temperature whilst in leaf, and may be removed into a warmer place while the bulbs are at rest. It is their natural habit to vegetate in a declining temperature, and I have seen the growth of the leaves of Am. Blanda and Br. Multiflora checked instead of promoted by the heat of the stove. Under the treatment recommended, Br. Multiflora produced in my greenhouse last winter six leaves nearly seven inches wide, which split the bulb by their vigorous growth; and a newly-imported bulb of Josephinæ fourteen leaves. *Observ.* It is certainly possible that one species of a genus which is otherwise local may be found also indigenous in a remote and insulated quarter of the globe, but it is very improbable; and I am confirmed in the suspicion that Thunberg confounded Nerine Sarniensis with Lycoris Radiata, by a specimen of Radiata from Japan, in Mr. Lambert's herbarium.

LYCORIS.

Bulbus ovatus. *Folia* bifaria, angusta, hiemalia, æstate depereuntia. *Scapus* sub-præcox, autumnalis. *Umbella* sub-12-flora? *Flores* inodori. *Pedunculi* suberectè divaricati. *Germen* trigonè ovale, ferè rectum, 3-loculare. *Loculi* 6-8 spermi, ovulis subglobosis. *Tubus* obsoletè trigonus, a germine sub-declinatus, sursum curvatus, et juxta faucem amplior. *Laciniæ* semi-patentes, sursum curvatæ, undulatæ. *Filamenta* pariter ferè cum laciniis in tubum coalescentia, assurgenter curvata, alterna longiora. *Stylus* sursum curvatus. *Stigma* simplex, acutum, circum-fimbriatum. *Capsula et semina* non visa. *Patria* Asiæ pars orientalis. *Species.*

* 1. Aurea. *Bot. Mag.* 409.

* 2. Radiata. *Bot. Rep.* 95.—*Specimen ex Japoniâ in herb. Lamb.*

Bulb ovate. *Leaves* narrow, bifarious, flourishing in winter, dying in the summer. *Scape* autumnal, a little before or with the leaves. *Umbel* probably under 12-flowered. *Flowers* scentless. *Peduncles* erect or sloping. *Germen* triangularly oval, very little bent downwards, 3-celled. *Cells* with 6-8 ovules, roundish. *Tube* obsoletely triangular, very little bent from the germ, curved upwards, a little widened at the mouth. *Petals* half expanded, curved upwards, undulated. *Filaments* inserted almost equally and coalescing at one height with the petals into a tube, the alternate longest. *Style* curved upwards. *Stigma* simple, acute, fringed round the sides. *Capsule and seeds* not seen. *Country* the Eastern part of Asia. *Species:* 1. Aurea, 2. Radiata. *Culture.* A light loam appears to suit them. Bulbs of L. Aurea have been left by me one or two winters in the open ground without perishing, but they did not vegetate. They should be kept dry in the stove in the summer, and ought to flower in the autumn. The growth of the leaves should be promoted by a moderate supply of water in the autumn. They are pretty hardy, and may in the spring be removed into the greenhouse; but they must be kept dry and warm in summer. L. Radiata does not flower near so freely with us, though I understand that it blooms abundantly at Calcutta about the beginning of August, though neither Aurea nor Radiata ripen their seed in Bengal. I apprehend that a very hot season of rest, and the vigorous growth of the leaf in a lower temperature, are the requisites. The general fault in the treatment of tender bulbs is, that we keep them in too uniform a temperature, either always in the greenhouse or always in the stove, and perhaps water them a little at all seasons, instead of abstaining entirely during part of the year while they are preparing their bloom, and allowing them a wet and cool season for the growth of their leaves.

GRIFFINIA.

Foliis petiolatis, filamento superiore sejuncto, loculis dispermis, a Lycoride discreta; seminibus procul-dubio accuratiùs distinguenda, quæ in Lycoride matura non vidi. Flores Griffiniæ non vidi, de quibus et semine Griffiniæ consulas *Bot. Reg.* 511, et v. 6 appendicem. "Semina obovata nitentia, ochroleuca, integumento duplici, albumine densè carnoso, radiculæ apice exserto." *Patria* America meridionalis. *Species.*

* 1. Hyacinthina. *Bot. Reg.*
2. Parviflora. *Bot. Reg.*

Separated from Lycoris by petiolated leaves, the upper filament detached, and 2-seeded cells, doubtless more widely distinguishable by the seed; but I have never seen ripe seed of Lycoris, nor met with any description of it. I have had no opportunity of examining the flowers of Griffinia, concerning which as well as its seeds, see Bot. Reg. 511, and v. 6 Appendix: "Seeds obovate, shining, yellowish white, with two integuments, and thick fleshy albumen within, the point of the radicle prominent." *Country* S. America. *Culture.* Requires the stove, and does not appear to be of difficult culture; but I have not possessed it long. It should have rest in the winter.

CRINUM.

Bulbus columnaris, vel sphæricus. *Folia* multifaria (nisi in C. Disticho), in columnaribus perennia, in sphæricis sæpe decidua. *Umbella* 1-60-flora. *Germen* mediâ parte crassius, ovale vel trigonè ovale, triloculare, loculis 1-31 spermis, sessile vel pedunculo directè continuatum. *Tubus* trigonè cylindricus, germine directè continuatus eoque gracilior, limbo sæpe longior, emarcescente limbo sæpe magnâ parte persistens. *Laciniæ* alternæ subæquales, internæ plerumque latiores. *Limbus* patens vel semipatens, ante expansionem inclinatus vel nutans. *Filamenta* extra faucem tubi inserta; alterna vix profundiùs et marginibus laciniarum interiorum puncto insertionis adnata; plùs minùs patentia vel declinata, apice plùs minùs plerumque assurgenter curvato. *Stylus* gracilis, apicem versùs vix tenuior. *Stigma* obtusum, trigonum, vel trilobatum. *Capsula* dissepimentorum destructione 1-2 locularis, sæpe difformis, valvis nullis vel obsoletis, seminibus temere disrupta. *Ovula* in polyspermis vix discreta, sed massæ cuidam non separabili in medio positæ adhærentia, apicibus versùs dissepimenta tendentibus. *Semina* carnosa, integumento viridi non separabili, sæpius magna, difformia. *Incolunt* orbem universum inter et prope tropicos.

SECTIO 1. PATENTES.

Subdivisio 1. NUTANTES; limbo ante expansionem nutante. Quoad vidi, tubo curvatiore, columnares vel sphæricæ, filamentorum basi gibbosâ vel lævi, sessiles vel subsessiles et loculis 2-4-polyspermis, nisi in C. Declinato; foliis in sphæricis vix undulatis.

* 1. Erubescens, var. Rubrilimba. *Bot. Mag.* 1232.
* –. var. 2. Major, limbo albo, tubo et germine rubro punctatis.
* –. var. 3. Minor, limbo albo, tubo et germine viridioribus.
* –. var. 4. Viridifolia, margine et basi foliorum viridiore. *Ex Demerarâ.* Griffin.
* –. var. 5. Berbicensis, foliis viridibus, sparsioribus; limbo, ut fertur, subrubescente. *Ex Berbice.* Lee. Forsan species diversa.
* 2. Cruentum. *Bot. Mag.* 171.
* 3. Amabile. *Bot. Mag.* 1605. foliis acutis. Superbum. *Roxb.*
* 4. Brachyandrum. *Bot. Mag.* 2231, *p.* 2. in spec. enum.

* 5. Declinatum. *Bot. Mag.* 2231. Monospermum, pedunculatum.
* 6. Defixum. *Bot. Mag.* 2208.
* 7. Ensifolium. mox in *Bot. Mag.*
* 8. Americanum. *Bot. Mag.* 1034.
9. Amœnum, margine foliorum subscabro. *Ex Ceylon.* Griffin.
* –. var. 2. Margine lævi. *Ex Bengal.*
* –. var. 3. Angustifolia, altior. *Ex Rangoon.* Carey. *Ex Ceylon.* Griffin.

Huic subdivisioni forsan referendæ.

* 10. Augustum, Sp. Amabili affinis, foliis obtusis.
11. Venustum. *Carey.* 35-flora, C. Longifolio quoad flores similis; C. Erubescentis magnitudine.
* 12. Mauritianum. *Loddiges.—Bot. Mag.* 2180, *p.* 2.
* 13. Longifolium. *Roxb. tab. depict.*
* 14. Lorifolium. *Roxb.*
*?15. Commelini. *Jacquin Hort. Schœnb.* Spec. Defixo simillima.
* 16. Canalifolium. *Carey.* Bulbo rotundo, foliis canaliculatis, margine scabro, limbo subrubescente.
17. Verecundum. *Carey.* Foliis Amœno similis, floribus dispar.
18. Erythrophyllum. *Carey.* Spec. ex Pegu, foliis sanguineis.
* 19. Elegans. *Carey.* Ex Pegu, bulbo ovato semi-columnari; floribus magnis, albis. C. Erubescentis magnitudine.

Subdivisio 2. INCLINATÆ; limbo ante expansionem inclinato. Quoad vidi, tubo rectiore, columnares, pedunculatæ, filamentorum basi gibbosâ, foliis sub-undulatis.

* 20. Toxicarium. *Bot. Mag.* 1073. Varietates sunt vix notâ dignæ.
* 21. Brevifolium. *Bot. Reg.* 179. Bracteatum.
* —. var. Angustifolia foliis minùs undulatis.
* 22. Pedunculatum. *Bot. Reg.* 52. Australe *hortulanorum.*
* 23. Exaltatum. Pedunculato affinis germine et pedunculo gracilibus.
* 24. Canaliculatum. Pedunculato humilior, tubo breviore, limbo majore.
* 25. Anomalum. *Bot. Mag.* in spec. enum. 2121.5.—In tab. depict. ex Chinâ apud Soc. Hortic. foliis plicatis.

Huic subdivisioni forsan referendæ.

* 26. Procerum. *Carey.* Species maxima ex Pegu limbo pallidissimè subrubescente.
* 27. Sinicum. *Carey.* Limbo pallidissimè ochroleuco.
* 28. Sumatranum. *Roxb.* margine foliorum scabro.
29. Brevilimbum. *Carey.* *Bot. Mag.* in spec. enum. 2121.7. Insularum in Pacifico forsan incola.
30. Macrocarpon. *Carey.* Ex Pegu. *Bot. Mag.* spec. enum. 2231. p. 2.
31. Angustifolium. *Brown prod.*
32. Venosum. *Brown prod.*

SECTIO 2. SEMIPATENTES.

Subdivisio 1. ORNATÆ; ante expansionem nutantes. Quoad novi, tubo curvatiore, persistente vel unà cum corollâ marcescente, tropicæ, bulbo sphærico, foliis sæpius undulatis, germine sessili, loculis 2-polyspermis, filamentis magis declinatis et fasciculatis.

* 1. Broussoneti. *Bot. Mag.* 2121. Am. Ornata. *Banks. Herb.*
* 2. Yuccæides. *Bot. Mag.* spec. enum. 2121.6. *Banks. Herb.* Am.
* 3. Distichum. *Bot. Mag.* Am. Ornata 1253.
* 4. Petiolatum. *Bot. Mag.* 923. Giganteum. *Andrews's Bot. Rep.*
* 5. Scabrum. *Bot. Mag.* 2180.

* 6. Zeylanicum. *Bot. Mag.* 1171. Am. Ornata.
* 7. Latifolium. *Bot. Mag.* spec. enum. 2121.6.
* 8. Speciosum. *Bot. Mag.* 2217.
* 9. Moluccanum. *Bot. Mag.* spec. enum. 2121.6.

Huic subdivisioni forsan referenda.

* 10. Formosum †. Sp. nondum apud nos florida, ex Braziliâ, bulbo ovato; foliis latis, crassis, nitentibus, vix undulatis, basi purpurascente.

Subdivisio 2. LONGIFOLIÆ; ante expansionem inclinatæ. Quoad novi, tubo flaccidiore, foliis non undulatis, pedunculatæ, loculis polyspermis, tubo marcescente, extra-tropicæ, forsan etiam tropicæ.

* 11. Flaccidum. *Bot. Mag.* 2133. *Bot. Reg.* 426. A. Australasica.
* 12. Capense. *Bot. Mag.* 631. Germine longo, ovulis 27-31, stigmate integro. A. Longifolia.
* 13. Riparium. *Bot. Reg.* 546. Germine brevi, ovulis 11-14, stigmate trilobato.
* 14. Crassifolium.—Capense, var. Viridifolia. *Bot. Mag.* spec. enum. 2121.
* 15. Revolutum. *Hort. Kew. Bauer tab. depict. Burchell herb. et tab. depict.*
* 16. Aquaticum. *Burchell herb.* Campanulatum. *Bot. Mag.* spec. enum.
* 17. Longiflorum. *Bot. Reg.* 303. filamentis gibbosis.

Bulb columnar or sphærical. *Leaves* multifarious (unless in C. Distichum), perennial in the columnar, often perishable in the sphærical. *Umbell* from 1 to 60 flowered. *Germ* thickest near the middle, oval or triangularly oval, 3-celled, with from 1 to 31 ovules in each cell, sessile or continued in a straight direction by a peduncle. *Tube* triangularly cylindrical, continued from and slenderer than the germ, often more or less persistent after the limb is withered. The alternate petals nearly equal, the internal generally widest. *Limb* widely expanded, or half expanded, before expansion inclined, or nodding. *Filaments* inserted without the tube; the alternate a very little deeper and adhering at the point of insertion to the margins of the inner petals; more or less either spreading or declined, with the points generally more or less bent upwards. *Style* slender, a very little slenderer towards the point. *Stigma* obtuse, triangular, or 3-lobed. *Capsule* by the decay of the interior partitions becoming 1 or 2-celled, often deformed, burst by the seeds in the part which happens to be most ripe, having no valves, or, if any, not serviceable. *Ovules* ‡ in the many-seeded sorts not detached, but adhering to an intermediate mass, of which they appear to form a crenated margin; their points being turned sideways towards the partitions of the cell. *Seeds* fleshy, with a green inseparable integument, often large and deformed. *Scape* solid. *Inhabit* the whole belt of the world within and near the tropics.

Section first. Patentes, with wide-spreading coroll. *First subdivision. Nutantes,* with the limb nodding before its expansion. As far as I have seen, tropical, the tube more bent, bulb columnar or sphærical, the base of the filaments either gibbous or even, sessile or subsessile, with cells 2-4 or many-seeded, except C. Declinatum; leaves in the sphærical species scarcely, if at all, undulated. *Species.* * 1. Erubescens, var. Rubrilimba, with pink petals. *Bot. Mag.* 1232.—* –. var. 2. Major. White petals, tube and germen speckled with red.—* –. var. 3. Minor. White petals, tube and germen greener.—* –. var. 4. Viridifolia, from Demarara. *Mr. Griffin.* Edge and base of the leaves greener.—* –. var. 5. Berbicensis. Leaves green, spread more diversely; petals said to be pink. *Mr. Lee.*—* 2. Cruentum. *Bot. Reg.* 171.—* 3. Amabile. *Bot. Mag.* 1605.—* 4. Brachyandrum. *Bot. Mag.* spec. enum. 2231, p. 2.—* 5. Defixum. *Bot. Mag.* 2208.—* 6. Ensifolium.—* 7. Americanum. *Bot. Mag.* 1034.—8. Amœnum, with edge of the leaves a little rough, from Ceylon. *Mr. Griffin.*—* var. 2, with the margin smooth, from the north of Bengal. This variety may be seen at Mr. Kent's, at Lord Carnarvon's, and at Liverpool; and a bulb very like it, if distinct, at Mr. Cattley's, imported by Whittley and Co.—* var. 3, with the leaves narrower and taller; from Rangoon, *Dr. Carey*; from Ceylon, *Mr. Griffin.*

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† It will be understood, that the chief feature of the subdivisions of two sections is the nodding or inclination of the bud: that I have subjoined other particulars which appear to coincide with that character in each section, as far as I have seen, but which I scarcely expect to find invariable.

‡ This point alone would be sufficient to establish the genus. In Hippeastrum, Zephyranthes, &c. the ovules are detached, the two rows in contact with each other, if not actually interlapping, and as they grow they press against each other, and against the valve in the outer coat of the cell; in some genera bursting the valve, in others distending the capsule into lobes. In Crinum the ovules, being separated from the other row in the same cell and diverging, press by their growth against the lateral partition, which they break down, and tend to intermingle with those in the adjoining cell.

Perhaps belonging to this subdivision. * 9. Augustum, nearly allied to Amabile, with blunter leaves. I believe Lord Carnarvon's and mine to be the only bulbs of this species in England. Loddiges's great plant, and those sent from Sumatra by Sir S. Raffles, have the leaf of Amabile.—10. Venustum. *Carey.* 35-flowered, of the size of C. Erubescens, with flowers like those of C. Longifolium.—* 11. Mauritianum. *Loddiges.*—* 12. Longifolium.—* 13. Lorifolium.—* 14. Commelini. *Jacquin Hort. Schœnb.* Closely allied to C. Defixum.—* 15. Canalifolium. *Carey.* With a round reddish bulb, leaves deeply channelled, rough margin, and pinkish petals.—16. Verecundum. *Carey.* Like Amœnum in foliage, differing in the flowers.—17. Erythrophyllum. *Carey.* From Pegu, about the size of Longifolium, with blood-red leaves.—* 18. Elegans. *Carey.* From Pegu, with a purplish ovate bulb almost columnar, and large white flowers; leaves broader, blunter, and more erect than Lorifolium.

Second subdivision. Inclinatæ; the limb only inclined before expansion. As far as I have seen, with the tube straighter, bulb columnar, pedunculated, with the base of the filaments gibbous, and the leaves rather undulated. * 19. Toxicarium. *Bot. Mag.* 1073. Of this species there are varieties scarcely worth noticing, as well as of Brevifolium, and the two species approximate to each other.—* 20. Brevifolium. *Bot. Reg.* 179. under the name of Bracteatum, but it is not more bracteated than many other species. * Var. 2, with leaves narrower and less undulated.—* 22. Pedunculatum. *Bot. Reg.* 52. Called by nurserymen Australe.—* 23. Exaltatum. Allied to Pedunculatum, with the germ and tube slenderer.—* 24. Canaliculatum. A shorter plant than Pedunculatum, with the tube shorter and the limb longer.—* 25. Anomalum. *Bot. Mag.* spec. enum. 2121-5. A drawing from China belonging to the Hortic. Soc. with plicate leaves.

Perhaps belonging to this subdivision. * 26. Procerum. *Carey.* A species of the first magnitude from Pegu; flowers with a tendency to red.—* 27. Sinicum. *Carey.* Petals pale yellowish white.—* 28. Sumatranum. *Roxb.*; with the margins of the leaves rough.—29. Brevilimbum. *Carey.* A singular species, with the petals short like a Primrose. Brevilimbum and Brachyandrum were raised by Dr. Carey from seed sent to him from Sidney in New Holland; but it is most probable that those two, as well as Exaltatum and Canaliculatum, are natives of Otaheite, or some other island in the Pacific.—30. Macrocarpon. *Carey.* From Rangoon, with long stiff leaves 2 inches wide, petals white, broader than Toxicarium.—31. Angustifolium. N. Holl. *Brown Prod.*—32. Venosum. N. Holl. *Brown Prod.*

Second Section. Semipatentes, half-expanded. *First subdivision. Ornatæ;* nodding before expansion. As far as I know, with the tube more curved, persistent or perishing with the limb, tropical, bulb sphærical, leaves generally undulated, sessile germ, from 2- to many-seeded cells, and filaments more fasciculate and declined. * 1. Broussoneti. *Bot. Mag.* 2121.—* 2. Yuccæides. *Bot. Mag.* spec. enum. 2121-6. *Banks. herb.*—* 3. Distichum. *Bot. Mag.* 1253.—* 4. Petiolatum. *Bot. Mag.* 923. Giganteum. *In spec. enum.* The name Giganteum is absurdly misapplied to this species, which is of inferior stature, but distinguishable from all others by its petiolated leaves.—* 5. Scabrum. *Bot. Mag.* 2180.—* 6. Zeylanicum. *Bot. Mag.* 1171.—* 7. Latifolium. *Bot. Mag.* spec. enum. 2121-6. Closely allied to Zeylanicum, but easily distinguishable by a rougher margin and the absence of the red tip to the leaf. I believe mine to be the only true bulb of this species in England.—* 8. Speciosum. *Bot. Mag.* 2217.—* 9. Moluccanum. *Bot. Mag.* spec. enum. 2121, p. 6.

To this subdivision probably belongs an unrecorded species from Brazil, which I call C. Formosum, with an ovate bulb, purplish at the neck, leaves very thick and fleshy, glossy green, acute, from two to three inches wide, not undulate, with a nearly smooth margin.

Second subdivision. Longifoliæ; inclining before expansion. As far as I know, with the tube weaker and perishable, leaves' not undulated, and cells many-seeded; sphærical, pedunculated, growing without the tropics, perhaps also within. * 11. Flaccidum. *Bot. Mag.* 2133. *Bot. Reg.* 426.—* 12. Capense; with obtuse stigma, long germ, from 27 to 31 ovules.—* 13. Riparium; with three-lobed stigma, short germ, from 11 to 14 ovules. *Bot. Reg.* 546. Capense, var. Riparia.—* 14. Crassifolium. *Bot. Mag.* spec. enum. 2121. Capense, var. Viridifolia, but stated there to be probably a distinct species. Its leaves are much thicker, and it will not live, like Capense, in water.—*15. Revolutum. *Hort. Kew.* *Bauer's* drawing in the Banks. Lib. *Burchell's* drawing and herbarium.—* 16. Aquaticum. *Burchell's herbarium.* Campanulatum. *Bot. Mag.* spec. enum. found by Mr. Burchell growing in a pond in S. Africa.—* 17. Longiflorum. *Bot. Reg.* 303. with gibbous filaments; native country not known.

The tube is usually straighter in the last subdivision, but it will be found very much curved in some engravings (see C. Riparium, *Bot. Reg.* 546); in these species it is perishable, and would have been found straighter when the flower was in perfection; it weeps when it is tending to decay, and in a high temperature before expansion, bending near the germ.

Culture. Most of the plants of this genus being inhabitants of hot countries, require the stove, and a liberal supply of water during the summer months; but the quantity of moisture should always be lessened in the winter. Of the first section, however, those with columnar stems will not object to plentiful watering at all times, as the habit of their leaves is more decidedly perennial. The whole of the column should be kept above ground, and all the obsolete coats, which are the base of decayed leaves, should be gradually stripped away, leaving the bulbous stem smooth and clean. The growth and vigour of the whole genus is promoted by placing the pots upon moist sand; and the young bulbs thrive fast upon a tin tray placed upon a warm flue and nearly filled with sand, which may be frequently inundated, especially when the sun is hot, but should not be constantly flooded. C. Toxicarium and Brevifolium require a lighter loam than Pedunculatum, and although they will suffer much from want of water in summer, they do not like to stand in water.

Amongst the sphærical bulbs, § 1. *subd.* 2. C. Defixum may be entirely plunged in water in the summer, for a short time, to flower it, but the fibres will rot if kept too long in that situation, and very little water is necessary for it in the winter. C. Ensifolium is still more liable to suffer from much wet at that season. C. Lorifolium and Longifolium are so like in leaf that they can scarcely be distinguished. The former shows a little purple on the bulb; in the latter it is yellower. They are said to differ widely in the inflorescence, but have not yet flowered in England. I suspect that they should be left nearly dry in the winter, and plentifully watered and shaded in a hotbed in the summer. C. Commelini of Jacquin is unknown in this country, and appears very closely allied to Defixum, though described as an American species. I believe I have the plant, lately imported from Brazil. The bulbs of § 2, *subd.* 1, Ornatæ, with the exception of Petiolatum, may be left in a dormant state in the winter, especially Broussoneti, Yuccæides, Distichum, and Moluccanum. I believe the better mode of treating the others is to give them just moisture enough, by letting them stand on the sand, to prevent their fibres becoming very dry for a long time, or their leaves entirely decaying, and to start them with a more abundant supply in the spring. Whenever the youngest leaves of any Crinum with a sphærical bulb turn yellow and decay, the bulb should immediately be allowed to go to rest for a short time, the cause appearing generally to have been too much moisture in too low a temperature. The five first species of this section have the coroll more cup-shaped, and are natives of the coast of Africa, unless Scabrum be a native of Brazil, from whence it has been imported into this country. No Crinum, however, of this section has yet been found to be a native of America, and Scabrum has probably been taken there from Africa, as well as Broussoneti and Petiolatum, which are naturalized in the neighbourhood of Rio Janeiro. The East Indian sorts appear to have a more funnel-shaped coroll, liker in form to Capense. The plants of the 2*d subd.* of this section are chiefly greenhouse plants. The leaves of Crinum Flaccidum appear, however, to suffer quickly from frost in the greenhouse; and as it is apt to flower in autumn, and even in winter, I keep it in the stove at those seasons, and I have not yet bulbs enough of this species to try whether it will live out of doors. Capense, planted a foot deep in the border, and well watered in the summer, is a hardy plant; and I find the mule C. Govenium *(Hort. Trans.)* aliàs Zeylanico-Capense, and Erubescente-Capense, equally hardy. They survived last winter without protection, and pushed vigorously in the spring, notwithstanding frosty nights and snow. I apprehend that all the mules will prove as hardy as the female parent. C. Revolutum is the most difficult plant to manage of the whole genus, and the bulbs are very apt to perish. They require the most perfect drought in winter. If forced at that season they will bleed and decay. They will not thrive if they are raised much above ground and exposed to the action of the sun; or if wet insinuates itself within the outer coats. A moderately light loam appears to suit them, free air, and plenty of water in summer; the neck of the bulb being just above ground. At the approach of winter turn the pot on its side, and leave it perfectly dry. When the plant has completely ceased to vegetate, shake the earth carefully from its ball, pull off the decayed coats without making the bulb bleed, and wipe it very dry. If it seems mouldy, pour dry sand over it, and after a short time let it be wiped again; after which it may be repotted in dry pulverized loam, and left without a drop of water till the spring. Its flowers are very like those of Capense, but stand on shorter peduncles; the tube is of variable length, but not always shorter than the limb, as it has been described. The name was given on account of the curling of the tips of the petals. The plant which I call C. Revolutum is the A. Revoluta of the Hort. Kew. of which there is a drawing by Bauer in the Banksian Library. The description of it in the note, p. 917, Bot. Mag. is pretty accurate, and the figure 915 was probably made from a plant of that species, though extremely incorrect, the petals being too deeply divided, and the tube, which should have been long and slender, represented as funnel-shaped. In Mr. Burchell's drawing the tube is longer than the limb, and the native specimens in his Herbarium are very like C. Capense, though the bulb and leaves (as well as the habit of the plant) are very different, and exactly correspond with Bauer's drawing. Mr. Wykes, gardener to Mr. Woodford, showed me, the day before the sale at Springwell, the plant from which he assured me he was certain the figure 1178, Bot. Mag. had been made, and it was evidently the Common glaucous C. Capense. I should have bought it, if I had thought the point at all doubtful. The editor of the Bot. Reg. has lately stated that Mr. Woodford's bulb, or an offset from it, is now in Mr. Griffin's collection; but on inquiry, I learn from Mr. Griffin, that he disclaims all knowledge of it. The leaf which accompanies Jacquin's A. Variabilis is more like that of Capense than Revolutum, and there certainly exists no figure of Revolutum at all like the plant. C. Longiflorum, if it be a natural species, is a very singular plant, furnishing a link between two which are very remote, Erubescens and Capense. Its leaves, which are very like the mules between those two species, have grown in my stove eight or nine feet long, though it has not flowered there. I suspect that it would prefer a lower temperature and perhaps prove to be hardy. Capense will rarely flower, if kept the whole year in the stove, and I believe the mules from it will retain the same habit. A bulb of C. Aquaticum, brought to England by Mr. Burchell, has produced abundance of offsets in his collection, but has not flowered. The specimen in his herbarium shows a flower smaller and more campanulate than that of Capense: it is probably equally hardy. The leaves are rather more succulent. Of the doubtful species enumerated in the Bot. Mag. 2121, Umbellatum, *Carey*, proved to be the narrow-leaved Amœnum, Undulæfolium to be Scabrum, Floridanum to be Toxicarium, and 44-5-6-7, *Carey*, to be Pedunculatum and Canaliculatum. Mr. Griffin has bulbs from Ceylon in appearance much like the Bengal Speciosum, and they will probably prove to be of that species. Dr. Carey informs me that he has an unrecorded species of the Ornatæ from Mauritius, and I have two other species or varieties which have not yet flowered, one of which is an offset from a bulb sent to the Liverpool Garden from Ceylon. A bulb of Moluccanum, planted out of doors against the front wall of the stove, survived the last winter; and it remains yet to ascertain how hardy the sphærical bulbs may prove, and in how low a temperature they may be induced to flower. Toxicarium, planted out, turned yellow very early in the autumn, and appeared to be very tender. I do not think any Crinum likes to remain always under water, and probably the pond in which C. Aquaticum was found may be dry at some season. C. Capense flowered again after standing two winters in the pond, but weaker; and the bulbs seem to bloom best if kept drier in the winter and immersed in summer. I prefer a very light loam for seedlings of Crinum, but rather stronger soil for the old bulbs, and I find the use of peat generally prejudicial. If the leaves appear blotched with white, it is a sign that the soil is too retentive, and often that there is peat in contact with the bulb. The scape of Crinum becomes flaccid and leans after flowering.

I have at present 16 different sorts of mules in this genus, viz. from Capense impregnated by Zeylanicum, Speciosum, Scabrum, Erubescens, Cruentum, Defixum, Toxicarium, Brevifolium, Pedunculatum, and Canaliculatum; from Erubescens by Capense, Cruentum, and Americanum; from Scabrum by Exaltatum; from Brevifolium by Americanum; from Defixum by Speciosum. Lord Carnarvon has one from Pedunculatum by Zeylanicum, one from Capense by Americanum, and another by a plant which seems to be an accidental mule from Calcutta, between Defixum and Lorifolium, though sent as Lorifolium; and I believe the changes may be rung through the whole of this extensive genus. The seeds of Crinum, which often lie for near a year without vegetating, may be made to grow immediately by cutting away part of the seed and laying bare the point of the radicle or embryo; but this operation requires a light and skilful hand, as the direction of the sprout is very doubtful. Its point does not appear to issue always through the natural passage, as in other seeds, but, being probably pushed aside by irregular growth and pressure within the capsule, it seems to force its way through the solid fleshy substance, and will even pierce another seed if pressed against it. I have observed that in Erubescens it generally issues near the point of attachment, though sometimes in a contrary direction; in Capense, and also in the mule seed from Erubescens impregnated by Capense, generally at a distance from the point of attachment; a remarkable circumstance probably connected with the irregular growth of the ovules.

URCEOLARIA.

Bulbus rotundus. *Folia* lata, petiolata. *Umbella* 4-pluri?-flora. *Pedunculus* curvatus. *Germen* pendulum, ovatum, triloculare, trisulcum. *Tubus* germinis et pedunculi continuus, parte inferiore gracilis, cylindricus, superiore latè ventricosus. *Laciniæ* breves. *Stigma* trigonum. *Semina* plura. *Patria* America meridionalis. *Species.*

1. Pendula. *Ruiz et Pavon* 287. Crinum urceolatum.

Bulb round. *Leaves* broad, petiolated. *Umbell* 4, or perhaps many-flowered. *Peduncles* curved. *Germ* pendulous, ovate, 3-celled, 3-furrowed. *Tube* continued from the germ and peduncles, very slender and cylindrical near the germ, wide and ventricose in the further part. *Petals* short. *Stigma* triangular. *Seeds* many. *Species* 1. Pendula.

This plant is only known by the figure and imperfect description of Ruiz and Pavon. It is widely distinguishable from Crinum, and appears to have some points of affinity with the plant they call Pancratium latifolium.

CYRTANHUS.

Bulbus subrotundus. *Folia* bifaria, perennia. *Scapus* æstivus. *Umbella* multiflora. *Germen* breve, trigonum, mediâ parte crassius, pedunculi continuum (ambo in C. obliquo curvati et cernui). *Tubus* germinis continuus, curvatus, sub-infundibuliformis obsoletè 6-angularis, fauce amplâ, sulcis intùs sex angulosis 6-dentatâ compactis membranâ cujus apices inter laciniarum bases terminantur. *Laciniæ* breves, alternæ æquales. *Filamenta* longitudinis sub-alternæ, mediâ ferè parte tubi costis inter prædictos sulcos inserta, interiora brevissimo discrimine profundiùs. *Antheræ* breves, erectæ, nisi quòd flos cernuus est. *Stylus* apicem versùs gracilior. *Stigma* minutum, trilobatum. *Capsula* trilocularis. *Semina* nigra, foliaceo-alata. Patria Africa meridionalis. *Species* unica.

* 1. Obliquus. *Bot. Mag*. 1133.

Bulb roundish. *Leaves* bifarious, perennial. *Scape* produced in summer. *Umbel* many-flowered. *Germ* short, triangular, widest in the middle, continued from the peduncle (both curved downwards in C. Obliquus). *Tube* continued from the germ, curved, narrowly funnel-shaped, with six obsolete angles; wide-mouthed, with six angular internal furrows, formed by a membrane with six points, which terminate between the bases of the petals. *Petals* short, the alternate nearly equal (in C. Obliquus the inner much widest). *Filaments* nearly of alternate lengths, inserted near the middle of the tube into the ribs between the aforesaid furrows, the inner a very little lowest. *Anthers* short, erect if the flower were not pendulous. *Style* slenderer towards the point. *Stigma* minute, 3-lobed. *Capsula* 3-celled. *Seeds* black, foliaceously winged. *Country* S. Africa. *Species*. 1. Obliquus.—*Culture*. I understand that this plant is found with the bulb sometimes above ground in Africa. With us it likes a light loam, and a very sparing supply of water in winter. A large number of bulbs of this plant flower very freely in Mr. Griffin's, where they stand on a back shelf near the glass in the stove; they should have just water enough in the winter to prevent the leaves from perishing, more is injurious. In spring the supply must be increased.

VALLOTA.

Bulbus ovatus. *Folia* bifaria, perennia. *Scapus* æstivus. *Spatha* bifida. *Umbella* 4-5-flora. *Germen* pedunculi erecti continuum, gracile, trigonè oblongum. *Tubus* germine continuatus; pars inferior sub-cylindrica, superior latè infundibuliformis, costâ longâ inter filamenta intùs instructa. *Filamenta* conniventia, tria tubo prope faucem vel laciniis exterioribus extra tubum, tria sub interiorum basi infra tubi faucem, corollæ latere tantùm adnata. *Stylus* declinatus. *Stigma* trigonum, vix trilobatum. *Capsula* 3-locularis. *Semina* nigra, foliaceo-alata. *Patria* Africa meridionalis. *Species.*

* 1. Purpurea. *Bot. Mag.* 1430. Amaryllis Purpurea.
* –. var. minor. *Bot. Reg.* 552.

Bulb ovate. *Leaves* bifarious, perennial. *Scape* produced in the summer. *Spathe* bifid. *Umbel* 4-5-flowered. *Germ* continued from an erect peduncle, slender, triangular, oblong. *Tube* continued from the germ, the lower part nearly cylindrical, the upper widely funnel-shaped, with a long internal rib between each pair of filaments. *Filaments* conniving, three adhering to the tube near its mouth or to the outer petals above the mouth, three to the tube much below the base of the inner petals, and continued like prominent ribs. *Style* declined. *Stigma* triangular, scarcely 3-lobed. *Capsule* 3-celled. *Seeds* black, foliaceously winged. *Country* Africa. *Species.* 1. Purpurea. *Bot. Mag.* 1430. * –. var. minor. *Bot. Reg.* 552.—*Culture.* A very sandy soil is requisite for this plant. It thrives for a while and flowers well in peat, but is very liable to perish in it from too great retention of wet. Like the other bulbs allied to Cyrtanthus it should have very little water in winter, but ought not to lose its leaves. In summer it likes a great deal of moisture. The neck of the bulb should be kept above ground, and the dead coats, which are very retentive of wet, should be pulled from it. From the appearance of the bulb and leaf I suspect that a new species of Vallota has been lately imported from the Cape by Mr. Lee. I am told that the name Vallota, given by Mr. Salisbury, has been adopted in France; but the genus has not been before defined.

MONELLA.

Bulbus parvulus, ovatus aut subrotundus. *Folia* bifaria, decidua. *Scapus* æstivus. *Umbella* 2-pluriflora. *Germen* pedunculo rectè continuatum, trigonè ovale. *Tubus* intùs lævis, parte inferiore curvatâ, arctâ, superiore subinfundibuliformi, vel ventricosâ, amplâ. *Laciniæ* breves, subæquales. *Filamenta* tubo prope faucem inserta, alterna brevi discrimine profundiùs et breviora. *Stylus* incurvatus. *Stigma* trifidum. *Capsula* ovalis, trilocularis. *Loculi* ovulis circitèr 20. *Semina* nigra, foliaceo-alata. *Patria* Africa meridionalis. *Species.*

SECTIO 1. TUBO SUBINFUNDIBULIFORMI.

* 1. Angustifolia. *Bot. Mag.* 271.
* 2. Odora. *Bot. Reg.* 503.
* 3. Ochroleuca. *Burchell herbar.*

SECTIO 2. TUBO VENTRICOSO.

* 4. Spiralis. *Bot. Reg.* 167.
5. Glauca. *Burchell.* Cyrtanthus Collinus, *Bot. Reg.* 162.
* 6. Ventricosa. *Willden.* Cyrtanthus angustifolius. *Jacq. Hort. Schœn.*

Bulb small, ovate or roundish. *Leaves* bifarious, annual. *Scape* pro duced in summer. *Umbel* from two to many-flowered. *Germ* continued from a straight peduncle, triangularly oval. *Tube* smooth within, the lower part narrow and curved, the upper part narrow-funnel-shaped or ventricose, with the mouth open. *Petals* short, nearly equal. *Filaments* inserted in the tube near the mouth, the alternate a little deeper, shorter. *Style* curved. *Stigma* trifid. *Capsule* oval, 3-celled. *Cells* with about 20 ovules in two rows. *Seeds* black, foliaceously winged. *Country* S. Africa. *Species.* § 1. *Tube narrow-funnel-shaped.*—* 1. Angustifolia. *Bot. Mag.* 271.—* 2. Odora. *Bot. Reg.* 503.—* 3. Ochroleuca. *Burchell herbarium.*—§ 2. *Tube ventricose.*—* 4. Spiralis. *Bot. Reg.* 167.—5. Glauca. *Burchell.* C. Collinus. *Bot. Reg.* 162.—* 6. Ventricosa. *Willd.* C. Angustifolius. *Jacquin.*—*Culture, &c.* The leaves of all the species seem to be annual, and the bulbs should be left dry in the winter; being planted in a sandy soil, not peat. The flowers of the first section incline to one hand, of the second diversely; but the sections cross each other in another important feature; Angustifolia agreeing in its pendulous posture with Spiralis and Glauca, Ventricosa in a more erect habit with Odora ond Ochroleuca. Ochroleuca appears to be chiefly distinguishable from Odora in colour, and perhaps ought to be considered as a local variety, though all the native specimens in Mr. Burchell's herbarium are of a yellowish white. As yet I have only seen the flower of Angustifolia in a fresh state. Glauca is lost in this country. The name Monella was suggested by Mr. Salisbury, as well as that of the following genus, though I believe he makes further divisions, to which I should object. The editor of the Bot. Reg. has hastily quoted Jacquin's Cyrtanthus ventricosus, as synonymous with Spiralis, saying that Jacquin has put the leaf of another plant to it. Jacquin's figure is however correct, and the flower is essentially distinct from Spiralis, which has the coroll pendulous, and the style shorter than the tube, while Jacquin's plant has the tube wider, and only a little inclined, and the style much longer than the tube.

GASTRONEMA.

Bulbus, folia, germen, pedunculus, laciniæ, et *stigma,* ut in Monellâ. *Tubus* ut in Monellâ Ventricosâ, parte inferiore cylindricâ, arctâ, curvatâ; superiore ventricosâ, amplâ. *Filamenta* conniventia, alternè longiora; interiora summâ ferè, exteriora mediâ ferè parte tubi regionis ventricosæ inserta; superiora tria prope tubi latera tortè declinata, inferiora recta apicibus conniventibus. *Antheræ* breves, incumbentes. *Stylus* declinatus, laciniæ inferiori adpressus. *Patria* Africa meridionalis. *Species.*

* 1. Clavatum; 1-2-florum. *Bot. Reg.* 168. C. Uniflorus. *Willd. Am. Clavata.*

Bulb, leaves, germ, peduncle, petals, and *stigma,* as in Monella. *Tube* as in M. Ventricosa, the lower part cylindrical, narrow, curved; the upper ventricose, wide. *Filaments* conniving, the alternate longer; the inner inserted near the top, the outer near the base of the ventricose part of the tube; the three upper tortuously declined round the sides of the tube; the three lower straight, with their points conniving. *Anthers* short, incumbent. *Style* declined, and pressed against the lower petal. *Country* S. Africa. *Species.* * 1. Clavatum. *Bot. Reg.* 168.—*Culture, &c.* The same culture suits this plant and the genus Monella. It has flowered with Mr. Burchell in the open ground, bearing two flowers on a stem, on which account I have restored its original name Clavatum, Uniflorum being incorrect. If the bulbs are set in the open ground, it would probably be advisable to take them up in the winter, or at least to place them in a very dry border.

HIPPEASTRUM.—*Knight's-star-lily.*

Bulbus subrotundus. *Folia* bifaria, annua vel persistentia. *Scapus* 2-7-florus, pedunculatus, cavus. *Spatha* bifida. *Pedunculus* rectus apice curvato, cavus. *Germen* trigonè et sub-turbinatè oblongum mediâ parte paullùm constrictum, diversâ directione à tubo et pedunculo declinatum. *Tubus* extùs trigonè subinfundibuliformis, externarum laciniarum marginibus summâ parte extùs imbricantibus. Tubi faux arcta, obliqua, latere inferiore abbreviata, parte superiore intùs vel lævis, vel gibbo parvulo munita, vel fimbriata, vel calyptrata. *Laciniarum* quaterna discrepantia, exterarum superior duabus latior, internarum inferior duabus angustior. *Filamenta* declinata, imæ laciniæ adpressa, assurgenter curvata, quaternâ longitudinis discrepantiâ, quaternâ quoque positure variatione gradatim tubo infra laciniarum junctionem inserta; externa internis breviora, sed ea tantùm quæ basi consimilium laciniarum supposita sunt, longitudine et positurâ consimilia; superius minùs abbreviatum, imum minùs elongatum; superius altiùs, imum profundiùs insertum. *Stylus* declinatus. *Stigma* trilobum, sæpius trifidum. *Capsula* germine erectior, 3-locul. 3-valv. extùs inter loculos profundè sulcata, undè sectio transversa trilobata. *Loculi* ovulis 18-40 vel ultra, fructu maturo hiantes. *Ovula* liquore repleta, complanata, cumulata, angulo interiori loculorum biseriatim alligata, marginibus rotundatis alternatim imbricantibus. *Semina* uno ordine conserta, foliaceo-alata, integumento duplici separabili, testâ externâ nigrâ. Incolunt Hemisph. Occid. *Species.*

* 1. Crocatum. *Bot. Reg.* 38.
* 2. Pulverulentum. *Bot. Reg. v.* 7. A. Acuminata.
* 3. Fulgidum. *Bot. Reg.* 226.
* –. var. miniata. *Bot. Mag.* 1943. Am. Miniata.
* 4. Rutilum. *Bot. Reg.* 23.
* 5. Equestre; tubo gracili, cernuo; stigmate rotundatè et breviter trilobo. v. minor. *Bot. Mag.* 305.
* –. var. major. *Bot. Reg.* 234. as Amaryllis
* –. var. plena.
* –. var.? Glabrifolia.
6. Miniatum. *Ruiz et Pavon,* tubo brevi fauce fimbriatâ, laciniis exteris angustioribus.
* 7. Reginæ. *Bot. Mag.* 453. Stigmate rotundatè et breviter trilobo.
* 8. Vittatum. *Bot. Mag.* 129.
* –. var. Latifolia. *Lindley Coll. Bot.*
* 9. Solandriflorum. *Lindley Coll. Bot.*
* –. var. Striata.
* 10. Psittacinum. *Bot. Reg.* 199.
* 11. Calyptratum. *Bot. Reg.* 164.
* 12. Aulicum. *Bot. Reg.* 444. Laciniis exteris angustioribus; laciniâ imâ labris filamenta comprehendente.
13. Advena; *sp. mihi non visa. Bot. Mag.* 1125.

Bulb roundish. *Leaves* bifarious, annual or perennial. *Scape* 2-7-flowered, with peduncles, hollow. *Spathe* 2-cleft. *Peduncle* straight, with the end curved, hollow. *Germ* triangularly oblong, a little wider at the top, and constricted as if by a ligature in the middle. *Tube* without triangularly narrow-funnel-shaped, the margins of the outer petals lapping over. Mouth of the tube closed, oblique, being abbreviated on the lower side; within smooth, or furnished above with a small knob, or fringe, or screen. *Petals* of four different breadths, of which the upper outer petal is wider than the other two; the lowest inner narrower than the other two inner petals. *Filaments* lying in the channel of the lowest petal, bent upwards, of four different lengths, inserted *into the tube below the junction of the petals* with a fourfold and graduated variation of position, the insertion of the upper one being

highest, and of the lower lowest. The outer filaments shorter than the inner, those only being alike in length and posture which are placed at the foot of corresponding petals, the upper of the outer being less abbreviated, and the lowest of the inner less prolonged. *Style* declined. *Stigma* 3-lobed, generally trifid. *Capsule* more erect than the germ, 3-celled, 3-valved, deeply furrowed without between the cells, so that the transverse section is 3-lobed. *Cells* with from 18 to 40 or more ovules in each, opening when the capsule is ripe. *Ovules* containing a fluid, flat, piled in two rows and tied to the inner angle of the cells, with their edges rounded and lapping alternately. *Seeds* closing into one row, wingedly foliaceous, with two integuments, the outer shell black. Inhabit the western hemisphere. *Species.* * 1. Crocatum. *Bot. Reg.* 38.—* 2. Pulverulentum. *Bot. Reg. v.* 7. A. Acuminata.—* 3. Fulgidum. *Bot. Reg.* 226.—* - var. miniata. *Bot. Mag.* 1943. A. Miniata.—* 4. Rutilum. *Bot. Reg.* 23.—* 5. Equestre; v. minor. *Bot. Mag.* 305.—* - var. major. *Bot. Reg.* 234.—* - var. double.—* var. smooth-leaved.—6. Miniatum. *Ruiz and Pavon;* tube short and bearded within, outer petals narrowest.—* 7. Reginæ. *Bot. Mag.* 453.—* 8. Vittatum. *Bot. Mag.* 129.—* - var. latifolia. *Lindley Coll. Bot.*—* 9. Solandriflorum. *Lindley Coll. Bot.*—* - var. Striata.—* 10. Psittacinum. *Bot. Reg.* 199.—* 11. Calyptratum. *Bot. Reg.* 164.—* 12. Aulicum. *Bot. Reg.* 444. The lowest petal embracing the filaments.—13. Advena. *Bot. Mag.* 1125. *Never seen by me in flower.—Culture, &c.* Vittatum is a hardy plant, and if not planted too near the surface will thrive and ripen its seed in the open border. A little sawdust may be thrown over in winter to exclude the frost. The rest may be considered as stove plants, since they flower best with more warmth than the generality of greenhouse plants require. All the species, as far as they have been tried, appear to breed freely together, and I have already 12 or 13 hybrid crosses. I have never seen an instance of a bulb of this genus producing a solitary flower, and I believe it never occurs. The weakest seedlings produce two. I have seen Vittatum produce seven on a stem, Pulverulentum six, Rutilum five. By a proper alternation of moist and dry, hot and cool treatment, some of the species may be made to flower twice; Fulgidum, and the mule between Fulgidum and Rutilum, even four times in the year. The best soil for the greater part of the genus appears to be a loam of middling strength; for Equestre, Crocatum, and the mule from Reginæ by Crocatum, very sandy; for Vittatum and Reginæ, and the mules between them, rather stronger, but not very retentive. A peat compost will sometimes promote a rapid growth of the bulb and a finer head of flowers, but it is very apt to cause rottenness amongst the fibres, and sometimes destroys the bulb. The last-mentioned sorts should be left nearly dry and in a cool situation in the winter; in the spring, on being brought into a warmer place and watered, they will immediately flower, and push new leaves, after which they should be removed into the greenhouse and left with very little water till August, when by replacing them in the stove and watering them, they may be expected to bloom again. From Fulgidum, and the mules from Rutilum by Fulgidum, flower-stems may be obtained every three months by a similar alternation of moist and dry. Rutilum is more disposed to throw up two simultaneous stems, and will not readily flower at more than two seasons; and if watered constantly it will only flower once. My usual treatment of these bulbs is to set them, after they have made their shoot, on the ground under the shelf upon which the growing plants stand adjoining to the front flue, where they remain almost without water till the point of a flower-bud appears, but in the summer a cooler situation is desirable. The mules of the second cross from Reginæ, or Equestri-vittatum impregnated again by Rutilum, flower repeatedly by setting them in the greenhouse, where they have very little water after flowering, or in summer even out of doors, and on their return into the stove they bloom again. By this treatment from October last, successively through the whole winter and spring, I never had less than 8 or 10 plants in flower at once, which were chiefly mules; and, being removed for ornament into the cool conservatory, the flowers were not injured by the low temperature in winter, but were more durable. Psittacinum appears to require rest in the winter; Calyptratum and Aulicum seem to have their leaves more decidedly perennial than any of the other sorts, but the supply of water should be lessened in winter. I have not had Solandriflorum long, but it appears to me to conform in habit with Vittatum, though perhaps tenderer. Pulverulentum (Bloom-leaved) was so named by me above a year ago, and the name adopted in the Liverpool Catalogue, and I believe by all those who cultivated it in this country; the plant, from which the figure in the *Bot. Reg.* was made, was so labelled in Mr. Griffin's collection. The plant is at once distinguishable from the other species by the glaucous bloom on its leaves; and I know not why the editor should have altered the received name for Acuminatum, but I suppose it was done so inadvertently. In my plant, which has now a six-flowered scape, the germ is reddish, and the tube marked with a reddish colour, like Fulgidum. In the Register the colour of both is green. Seedlings probably vary a little in colour. It will be observed that the peduncles are there described to be one inch, but are represented in the sketch two inches and a half long. They were probably elongated after the description had been made, like the peduncles of Brunsvigia. I have now before me Equestre major, with peduncles five inches and a half long, though it expanded its flower in the greenhouse, with the lights left open day and night, and the "maximum" of their length is stated in the Register to be three inches. The bulb figured in the Bot. Mag. as A. Miniata, is certainly a variety of Fulgidum, and not the A. Miniata of Ruiz and Pavon, which has a bearded tube, and agrees with Aulicum in having the inner petals widest. Bulbs were imported last year from Maranham and Cayenne, with leaves more glossy than Equestre, answering the description of their plant. I learn that one of them produced at Highclere a bearded flower a little darker than Fulgidum, and from the account I have received of it, I have reason to believe that it is a variety of Equestre, unless it be a new species; and I have set it down var. Glabrifolia. I am told that its limb does not expand like that of Equestre, but that its tube is long and bearded. No memorandum was made concerning the posture of the tube or the form of the stigma, which would have decided whether it was a variety of Equestre. In Hort. Kew. the tube of Equestre is erroneously called horizontal, though it is quite cernuous in both major and minor, and as it fades becomes perpendicularly pendulous. Mr. Ker (Journ. Sc. and A.), misled by that erroneous description, has stated that he separates A. Miniata from Equestris, on account of the cernuous tube of the former; but he has since properly defined the tube of Equestris major as sloping downwards (deflexus), and it is so figured. Equestre is distinguished by the slenderness and cernuous habit of the tube (notwithstanding the full-fronting expansion of the limb) and the short round lobes of its stigma, which is very little divided. I have an unknown bulb imported by Mr. Lee, together with Solandriflorum, which has leaves more obtuse and tending to glaucous than either var. of that species, and is reported to have a white flower margined with red. It is probably a new species of this genus, unless it be a variety of Vittatum, which it resembles much in foliage. Advena has been long lost in Europe, unless a bulb which I have had many years in a weakly state be of that species; and I only place it in this genus upon the report of others and the engraving in the Bot. Mag. The first four species, as well as the genus Pyrolirion, produce blind offsets, like some of the Gladioli, which do not vegetate immediately. There is every reason to expect that all the mules of which Vittatum is the mother, will prove hardy in a dry border. Bulbs have been lately imported from Brazil with thickish, erect, glaucous leaves, which perhaps belong to this genus; and we may expect it to be further increased by importations from S. America. After the bulb has been left dry, the scape of Amaryllis (p. 15) rises entirely before the leaves, singly and only once in a year; that of Hippeastrum irregularly but generally just before or with them; that of Crinum some time after. When Hippeastrum produces two scapes in the same season of the year, the second begins to bloom before the first is passed; when Crinum produces 2, 3, or 4, the successive scape rarely, if ever, appears before the flowers of the former are withered. The scape of Hippeastrum is erect after flowering.

COBURGIA.—*Coburg-lily.*

Scapus, spatha, pedunculus, corolla, stylus, stigma, filamenta, antheræ, pollen, bulbus, Hippeastro simillima. *Germen* oblongo-ovale. *Ovula* pauciora (8-14), trigona, oblonga, duobus ordinibus posita angulis interioribus alternatim consertis. *Semina* globosa, nitida, fusco-purpurascentia. *Folia* perennia. Incolunt Americam Meridionalem.

* 1. Reticulata. *Bot. Mag.* 657.
* 2. Striatifolia. *Bot. Reg.* 352. *Bot. Mag.* 2113.

Scape, spathe, peduncle, corolla, style, stigma, filaments, anthers, bulb, pollen, agree with Hippeastrum‡. *Germ* a little more oblong and not widest at the top. *Ovules* fewer, from 8 to 14 in a cell, triangular, oblong, in two rows, with their inner angles alternating. *Seeds* round, smooth, blackish purple. *Leaves* perennial. Natives of S. America. *Species.* * 1. Reticulata.—* 2. Striatifolia. *Observ.* Striatifolia, though perhaps only a variety of Reticulata, differs, besides the stripe on the leaf, in having a larger spathe, shorter germ and peduncles, tube straighter, petals longer but not wider, paler and less reticulated, the three lower striped with white; and the two lower outer petals, which in Reticulata are broader than the two upper inner petals, are exactly the reverse in Striatifolia. I have seen an intermediate plant, possibly a mule between them. These bulbs require a moderately strong loam, and in summer time a warm, shady, and moist situation. They succeed well in a hotbed, or in a warm part of the stove with moist sand under the pot, which should be so placed as to be rather shaded from the sun by taller plants. The bulbs should not lose their leaves in winter, but unless the supply of water is greatly diminished their fibres will rot. I have seen the bulbs thrive well for a time in peat, but sometimes perish after flowering; and I do not think it can be used with safety. With respect, indeed, to every sort of bulb, the more retentive the soil is in which it is planted, the more carefully the gardener must avoid oppressing it with wet during its period, either of absolute rest, or of cessation from growth; the lighter the soil, the more he must attend to a constant supply of water during its season of activity; and it should be remembered that almost all tender bulbs are accustomed in their native country to very decided seasons of drought and wet.

SPREKELIA.—*Jacobæa-lily.*

Bulbus subrotundus. *Folia* annua. *Scapus* cavus, 1-rarò 2-florus. *Spatha* cylindrica apice diviso. *Pedunculus* rectus, cavus. *Germen* à pedunculo declinatum, Hippeastri consimile, nisi quòd crassius et minùs angulosum. *Tubus* sub-nullus. *Lacinia* superior à germine continuata apice reflexo; cæteræ devexæ, præsertim tres inferiores quæ genitalia amplectuntur. *Laciniarum* quaterna diversitas, exterarum superior, internarum inferior duabus latior. *Filamentorum* quaterna longitudo; tria exteris laciniis apposita breviora, superius brevissimum; tria interioribus apposita longiora, imum longissimum. *Filamenta* stylum fasciculatim amplexa, unà cum stylo declinata apicibus resurgenter curvatis; ad basin laciniarum pariter membranâ fimbriatâ juncta et corollæ inserta. *Stigma* trifidum. *Ovula* plana, biseriatim imbricantia. *Capsula* matura et semina non visa. Incolit Americam meridionalem. *Species*.

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‡ *Tube of Coburgia taken from Striatifolia.* A web connects the base of the two upper interior petals, on one side, with the midrib of the upper exterior, and on the other, at a rather lower point with the upper side of the two other or lateral exterior petals. A web connects the lower side of the lateral exterior petals with the undermost inner petal, at a point ¼ of an inch lower. The insertion of the two upper lateral filaments is very little lower than the highest, and the difference would be scarcely observable, if the gradation did not call attention to it.

1. Formosissima. *Bot. Mag.* 47.

Bulb roundish. *Leaves* annual. *Scape* 1, rarely 2-flowered. *Spathe* cylindrical with the end cleft. *Peduncle* straight. *Germ* declined from the peduncle, like that of Hippeastrum, unless a little thicker and less angular. *Tube* almost none. Upper *petal* continued from the germ, with the point bent back, the others sloped downwards, especially the three lowest, which embrace the style and filaments. A fourfold diversity of the *petals*, the uppermost of the outer, the lowest of the inner being wider than the other two of the same rank. A fourfold length of the filaments; the three placed at the foot of the outer petals shorter, the uppermost shortest; the three at the foot of the inner longer, the lowest longest. *Filaments* fasciculately embracing the style, and declined together with it, the point being curved upwards; joined together by a bearded membrane, and inserted at the same height into the corolla at the foot of the petals. *Stigma* trifid. *Ovules* flat, inter-lapping. Ripe capsule and seeds not seen. Inhabits S. America. *Species*. 1. Formosissima. *Bot. Mag.* 47.—*Culture*, *&c.* I had wished to call this genus Jacobæa, a name to which the public have been long used, but it was called Sprekelia by Heister, though I am not aware that the name has been adopted, and I have therefore thought it right to adhere to that already given to it. It will be observed, that the diversity of the petals and filaments in this genus is founded upon a different rule from that which governs Hippeastrum; whereas Coburgia and Hippeastrum are only distinguishable by the examination of the germ, when the ovules and seeds are seen to be different. The bulbs of Sprekelia are perfectly hardy, and appear to like a low temperature. Its flower-stems rise weakly in the stove, and immediately on removal into the greenhouse acquire strength. It rarely flowers in the open border, though the leaves grow vigorously, unless the bulbs are taken up in the winter, or when by the neighbourhood of a hot flue the earth round them is dried in the winter. If the bulbs are kept for a few months without water, in the stove or greenhouse, they are sure to blow in the spring, producing often two successive scapes; if watered in the winter they will seldom bloom. Perhaps a second interval of drought might induce them to flower again in the autumn. In order to flower them in the open border, the bulbs must be taken up and kept dry in winter. The injury done to the fibres in digging up the bulb destroys the flower-bud of Am. Belladonna, unless it is pretty forward, but it does not appear to prevent the flowering of Sprekelia in the following spring. I have twice known a two-flowered scape of Sprekelia, but I have never known nor heard of its having ripened seed in this country. It seems difficult to regulate the temperature, and the degree of moisture and exposure, so as to suit its fructification. There is a like difficulty with respect to the genus Lycoris, which is neither apt to make seed here nor at Calcutta. The ovules, however, of Sprekelia, when magnified, appear very different from those of Hippeastrum. In Sprekelia the embryo is close to the margin of the ovule, which projects very little on the side next to the dissepiment. The ovule is also narrower and more pointed.

ZEPHYRANTHES.—*Occidental Swamp-lily.*

Bulbus parvus, subrotundus. *Folia* linearia angusta, verna. *Scapus* cavus, pedunculatus, 1-2-florus. *Spatha* in 1-floris cylindrica, in 2-floris bifida, pedunculo et germine longior. *Germen* breve Hippeastri simile, à pedunculo plerumque declinatum, corollâ continuatum, rariùs pedunculo continuatum corollâ declinatâ. *Ovula* circiter 14, plana, compressa, lateribus rotundatis, crassiora ac pauciora quàm in Hippeastro, et duplici ordine confusiùs posita. *Tubus* brevis, extùs angustè infundibuliformis. *Laciniæ* alternæ consimiles, tres exteræ marginibus tubo imbricantibus latiores. *Filamenta* distantia, apice conniventia, laciniarum basi extra tubum pariter ferè inserta, alterna (exteriora scilicet) vix profundiùs et breviora; filamentum superius sejunctum et stylo aversum. *Stylus* declinatus. *Stigma* trifidum. *Capsula* ut in Hippeastro. *Semina* ordine duplici alternatim imbricantia, plana, dorso rotundato, compressione irregularia, margine vix foliaceo; integumento duplici, exteriore nigro nitente, interiore tenuissimâ separabili, adhærente tamen albumini densè carnoso. *Embryon* cylindraceum, longitudine tertiæ partis albuminis, radiculâ umbilico albo cavato approximatâ. *Incolunt* plagas Occidentales. § 1. Unifloræ spathâ integrâ. *Species.*

* 1. Tubispatha, tubo brevissimo, intùs flexu filamentorum rotundato. *Bot. Mag.* 1586.
* 2. Atamasco, tubo semunciali subinfundibuliformi. *Bot. Mag.* 239.
* –. var. 2. Minor, flore minore.

§ 2. Bifloræ spathâ divisâ.

1. Chloroleuca. *Ker in Journ. Sc. et A.* Amaryllis. *Bauer tab. depict.*
2. Lutea. *Pavon in herb. Lamb.*

Bulb small, roundish. *Leaves* linear, narrow, produced in spring. *Scape* hollow, pedunculated, 1 or 2-flowered. *Spathe* tubular in the 1-flowered, bifid in the 2-flowered, longer than the peduncle and germ. *Germ* short, like that of Hippeastrum, generally declined from the peduncle and continued by the coroll, but sometimes continued from the peduncle, the coroll being sloped. *Ovules* flat, compressed, with the edges rounded, thicker and fewer than in Hippeastrum, and placed in two rows more confusedly. *Tube* short, outwardly appearing narrow-funnel-shaped. *Petals*, the alternate alike, the three outer broadest, with their edges overlapping the tube. *Filaments* diverging, with the points conniving, inserted nearly at the same point at the base of the petals without the tube, the alternate, viz. the outer, inserted a very little lower, and shortest; the upper filament a little detached and averted from the style. *Style* declined. *Stigma* trifid. *Capsule* as in Hippeastrum. *Seeds* in two rows, with their edges lapping alternately, flattened, with the back rounded, irregular by compression, with a scarcely foliaceous margin; two integuments, the outer black and shining, the inner very thin, but separable, though adhering to the solid fleshy kernel. The *embryo* cylindrical, about one third of the seed's length, with the radicle approached to the aperture which appears outwardly hollowed and white. *Inhabit* the Western Hemisphere.—§ 1. One-flowered, with the spathe tubular.—* 1. Tubispatha, with a very short tube, rounded within by a bend of the filaments.—* 2. Atamasco, with a tube half an inch long, narrow funnel-shaped.—* 2. var. 2. Minor, with smaller flowers.—§ 2. Two-flowered, with the spathe divided.—1. Chloroleuca, *Ker.* Amaryllis. *Bauer's drawing in the Banks. Libr.*—2. Lutea. *Pavon in Mr. Lambert's herbarium.*—*Culture, &c.* I am told that a pink variety of Tubispatha is cultivated at Paris. Bulbs of this genus will thrive either in peat, or loam, or a light compost. They may be left nearly dry in winter, especially Atamasco which flowers in the spring; but require abundance of water while growing. Atamasco will thrive in the stove, or greenhouse, or even in the open border. Tubispatha will live in the greenhouse, but does not flower without artificial heat, and

the bulbs which I planted out perished. In the stove it increases rapidly, soon filling the pot, whence its flowers spring up in succession two or three at a time. In both species I observe, that at the first appearance of the bud the coroll is naked at the point, being longer than the spathe. This is probably a generic feature; and from the rapidity of their expansion, the vulgar name *jump-ups,* which is given to Crocuses, would be equally applicable to them. It is possible that Pavon's Lutea may be the same plant as Bauer's Chloroleuca, or at least a brighter coloured variety. They appear to differ from Tubispatha (judging from the drawing and specimen) in nothing material but the divided spathe and 2-flowered scape, and I am satisfied that they belong to the same genus. I do not remember whether the spathe of Sprekelia Formosissima became bifid in the 2-flowered specimens, and that which I deposited at Sir J. Banks's is for the present mislaid; but I think the division of the spathe is likely to accompany at all times a 2-flowered scape. The description of the seed is taken from Atamasco. That of Tubispatha is not materially different. The internal difference in their tubes is not greater than occurs in the genus Hippeastrum.

PYROLIRION.—*Fiery-lily.*

Bulbus ovatus, bulbuliferus. *Folia* angusta suberecta. *Scapus* uniflorus. *Spatha* bifida imà parte integrà? *Germen* sessile vel pedunculo rectè continuatum, medià parte crassius. *Tubus* parte inferiore angustus, cylindricus, summà parte ventricosus. *Laciniæ* subæquales apice reflexo. *Filamenta* erecta, subæqualia. *Antheræ* incumbentes. *Stylus* declinatus. *Stigma* trifidum. *Patria.* America meridionalis. *Species.*

1. Flammeum. *Ruiz et Pavon.* 286. *Spec. in Herb. Banks.*
2. Aureum. *Ib.* Amaryllis Peruviana. *Ker.*
3. Flavum. *Pavon, spec. in Herbar. Lambert.*

Bulb ovate, surrounded by offsets (as are also the smooth-throated species of Hippeastrum). *Leaves* narrow, nearly erect. *Scape* one-flowered. *Spathe* bifid, undivided at bottom? *Germ* sessile, or continued in a straight line from the peduncle, thickest in the middle. *Tube* narrow and cylindrical in the lower part, ventricose in the upper. *Petals* nearly equal, with the point bent back. *Filaments* erect, nearly equal. *Anthers* incumbent. *Style* declined. *Stigma* trifid. *Country* S. America. *Species.* 1. Flammeum. *Ruiz and Pavon* 286.—2. Aureum. *Ib.*—3. Flavum. *Pavon spec. in Mr. Lambert's herbarium.* *Observ.* The species of this genus are only known to me by the plate and description of Flammeum and Aureum, a specimen of Flammeum in the Banksian, and of Flavum in Mr. Lambert's herbarium. It is evident that they form a genus. In the specimens of Flammeum and Flavum the germ is quite sessile; in the plate of Flammeum and Aureum, it is placed on a peduncle more than half an inch long, which is perhaps an error by the artist, as the peduncle is not mentioned in the description.

IXIOLIRION.—*Ixia-lily.*

Bulbus ovatus, sub-uncialis. *Folia* linearia; radicalia longiora, breviora in caule quasi bracteæ. *Pedunculi* axillares et terminales, 1-2 flori. *Germen* oblongum, tenue, pedunculo continuatum. *Corolla* ad basin divisa, laciniæ exteriores angustiores, minùs coloratæ. *Filamenta* alterna æqualia. *Stigma* (ut videtur) simplex. *Capsula* oblonga, striata, trilocularis, trivalvis. *Patria* Syria, &c. *Species.*

1. Tataricum. *Spec. in herb. Lamb.* Amaryllis.
2. Montanum. *Spec. in herb. Banks.*

Bulb ovate, about an inch long. *Leaves* linear; those from the bulb longer, those on the stalk shorter and bracte-like. *Peduncles* axillary and terminal, 1-2-flowered. *Germ* slender, oblong, continued by the peduncle. *Corell* divided to the bottom; the outer petals narrower and less coloured. *Filaments* alternately equal. *Stigma* (apparently) simple? *Capsule* oblong, striated, 3-celled, 3-valved. *Country* Asia.—Montanum grows in Syria, near Aleppo.—Only known to me by the specimens. The inner petals of both species appear to be blue or purple, the outer striped with green. The capsule appears to have a hard shell, which is striated or ribbed. The appearance of the bulb is intermediate between that of Amaryllideæ and Ensatæ.

OPORANTHUS.—*Autumnal Crocus-lily.*

Bulbus subrotundus. *Folia* autumnalia, hiemalia. *Scapus* autumnalis, uniflorus. *Spatha* cylindracea, apice diviso. *Tubus* subinfundibuliformis, brevis. *Laciniæ* alternæ æquales, exteræ latiores. *Filamenta* pariter infra laciniarum junctionem tubo inserta, externa breviora. *Stigma* trifidum. *Germen* sessile, tubo et scapo directè continuatum, ovale, complanatum, triloculare. (*Loculi* 7-9 ovulis biseriatim positis). *Ovula* subrotunda, angulis compressione incertis, margaritacea. *Regiones* incolunt mari Magno, Hadriatico, et Ægeo finitimas. *Species.*

* 1. Luteus; var. latifolia. *Bot. Mag.* 290.
* –. var. 2. Angustifolia.

Huic generi referendæ sunt (nisi Sternebergia *Kitaib.* genus sit per se).

2. Colchiciflorus. *Kitaib.*
3. Clusianus. *Clus. hist.* 1. 163. Narcissus Persicus.
4. Exiguus. *Schousboe maroc. p.* 1. 160. Amaryllis.
5. Citrinus. *Smith prodr. fl. græc.* 1. 221. Amaryllis.

Bulb roundish. *Leaves* autumnal, continuing through the winter. *Scape* autumnal, one-flowered. *Spathe* cylindrical, covering the germ, divided at the end. *Tube* narrow funnel-shaped, short. *Petals* alternately equal, the outer broadest. *Filaments* inserted a little below the junction of the petals at the same height into the tube, those belonging to the outer petals shortest. *Stigma* trifid. *Germ* sessile, continued in a straight line from the scape and tube, oval, flattened, 3-celled. (*Cells* with from 7 to 9 ovules in a row, in two rows, with an odd one at top, *in Lutea*). *Ovules* roundish, irregularly angular by compression, like pearls. *Inhabit* the countries bordering on the Mediterranean. *Species.* *1. Luteus; v. latifolia. *Bot. Mag.* 290.—* –. var. 2. Angustifolia. To this genus belong also, unless Sternebergia, *Kitaib.* be a genus by itself, 2. Colchiciflorus.—3. Clusianus.—4. Exiguus.—5. Citrinus.—Luteus is perfectly hardy, and probably the others would also endure our winters. I understand from Mr. Salisbury that the name Oporanthus was given to Luteus by L'Ecluse, I should otherwise have preferred the name Crocolirion. Colchiciflorus accords particularly with Crocus, in having the tube partly under ground, and the capsule protruded out of the earth at a later period. I should not consider that circumstance alone sufficient to warrant its separation from Luteus, under the name Sternebergia, given to it by Kitaibel, and the descriptions of the four last species accord with my definition of Oporanthus; but as I have not seen the flower of any of them, I cannot pretend to decide that there may not be grounds for separating Sternebergia from Oporanthus, though I am not aware of them. I have not seen the ripe seed of Luteus. Oporanthus differs from Zephyranthes in a lower insertion of the filaments, a sessile flower, a flattened and erect germ, rounder ovules, and no sejunction of a filament; probably in capsule and ripe seeds still more.

PANCRATIUM.

Bulbus ovatus. *Folia* æstiva, aut perennia. *Scapus* 1-pluri-florus solidus. *Spatha* in unifloris latere uno dehiscens, in cæteris bifida. *Germen* trigonè oblongum, breviter pedunculatum. *Tubus* trigonè subcylindricus. *Corona* dentata staminifera. *Filamenta* conniventia, alterna æqualia. *Antheræ* breves, mediâ ferè parte filamentis affixæ, *Polline* lævi. *Stigma* rotundatè trigonum, fimbriatum. *Ovula* rotundatè complanata, duobus ordinibus alternantia, in loculis cumulata et puncto prostante angulo interiori adhærentia. *Semina* testâ nigrâ, margine vix foliaceo. *Patria* Europa, Africa septentrionalis, Asia; et (vix credo) America septentrionalis? *Species*.

* 1. Maritimum. *Bot. Reg.* 161.
2. Canariense. *Bot. Reg.* 174.
* 3. Illyricum. *Bot. Mag.* 718.
* 4. Verecundum. *Bot. Reg.* 413. Biflorum, et Triflorum, *Roxburg*.
* 5. Zeylanicum. *Bot. Reg.* 479.
6. Longiflorum. *Roxburg*. *Ker Journ. Sc. and Arts.*

Bulb ovate. *Leaves* produced in the spring and summer, or perennial. *Scape* solid, 1-many-flowered. *Spathe* in the one-flowered divided on one side, in the rest bifid. *Germ* triangularly oblong, on a short peduncle. *Tube* triangularly cylindrical, a little wider towards the mouth. *Cup*, bearing the stamina, dentate. *Filaments* conniving, the alternate equal. *Anthers* short, attached nearly at their middle to the filaments. *Pollen* smooth. *Stigma* with three-rounded angles, fimbriated. *Ovules* rounded, flattened, alternating in two rows, placed horizontally in the cells, and adhering to their inner angle by a projecting point. *Seeds* with a black shell, and margin scarcely foliaceous. *Inhabit* Europe, N. Africa, including the islands, Asia, and perhaps N. America, which I think doubtful. *Species*. * 1. Maritimum. *Bot. Reg.* 161.—2. Canariense. *Bot. Reg.* 174.—* 3. Illyricum. *Bot. Mag.* 718.—* 4. Verecundum. *Bot. Reg.* 413. * 5. Zeylanicum. *Bot. Reg.* 479.—6. Longiflorum. *Roxburg*. *Ker Journ. Sc. and Arts.*—*Observ. and Culture.* The name of Pancratium, which in the Hort. Trans. I had proposed to retain to a group of Occidental bulbs, having been originally given to Maritimum, should properly remain with it. Maritimum differs from the other five enumerated, in having leaves which are not perishable in winter, unless exposed to frost. My observations on the pollen and ovules, are taken from Illyricum, which Mr. Salisbury, in the Hort. Trans. has detached under the name Almyra, more properly Halmyra, I believe on account of its seeds not having the foliaceous margin of Maritimum; but Canariense, which exactly conforms with Illyricum in leaf and flower, has ripened seed at Mr. Griffin's with a slight projection of the margin; and, although I have never seen the seed or flower of Maritimum, I apprehend that there is no substantial difference. I have no account of the seeds of the Asiatic species: they do not ripen with us or at Calcutta, where Verecundum is indigenous, but the seed probably brought from the higher lands by the floods. I neglected to examine sufficiently the ovules, which appeared to me rounder. If the seeds should turn out to be substantially distinct, I should give them the name of Tiaranthus, which I had intended for the whole of this group, when I proposed to preserve Pancratium to certain Occidental species. Bulbs of Maritimum are often sent to this country from America, under the name of Carolinianum, and Pursh says that it grows on the coast of Carolina and Georgia; but he quotes P. Verecundum, *Hort. Kew.* and the plate 5, in Catesby's appendix, which are certainly not Maritimum. Catesby's Fig. has green leaves, sessile germ, and petals not adhering to the cup, being either a many-flowered variety of Hymenocallis Rotata ill-represented, or a true and distinct Hymenocallis Caroliniana, which is a desideratum in our collections. It is quite distinct from the glaucous Maritimum, which is sent under the name of Carolinianum from the gardens in America, and is perhaps naturalized on the coast. Catesby's plant grew in a bog near Palluchacula, an Indian town in Georgia, on the Savanna river, which accords with the habit of H. Rotata. P. Maritimum grows naturally in the sea sand, and does not flower willingly with us. Perhaps a manured compost of sand, leaves, and dung, like that recommended for Hyacinths, a hotbed in the autumn, and a cool situation during the rest of the year, might be found to suit it. Illyricum is perfectly hardy, and though it grows in sea sand, it appears to like a rich and even manured soil. P. Canariense is in the collection of Mr. Griffin. P. Longiflorum is only known to us by the description and drawing of Dr. Roxburg. It seems to be unknown and lost at Calcutta. Verecundum and Zeylanicum require a cool season of rest; if kept dry in the stove, the bulbs are apt to fret and perish, but they bear the voyage well and flower immediately after their arrival, which indicates that the bulbs should be taken out of the earth and placed in a cool room. I think it very probable that we shall find them succeed in the open ground or greenhouse in the summer. To this genus probably belongs

Pancratium Maximum. *Forskäl. fl. Ægypt. arab.* 72. with a very large solitary white flower.

STENOMESSON.

Bulbus rotundus. *Folia* angusta. *Scapus* præcox? *Umbella* pluriflora, pedunculata. *Germen* pedunculo rectè continuatum, ovatum, trisulcum. *Tubus* mediâ parte angustior, summâ ventricosus. *Laciniæ* breves, reflexæ, vel forsan etiam semipatentes. *Nectarium* dentatum filamenta connectens. *Filamenta* suberecta, alterna longiora. *Antheræ* breves, incumbentes. *Stigma* obtusum, ut videtur simplex. *Capsula* latè ovata, trisulca, valvis dehiscens. *Semina* nigra, curvatim oblongo-ovata. *Patria* America meridionalis. *Species.*

1. Coccineum. *Ruiz et Pavon, p.* 285. Pancratium Croceum. *Redouté.*
2. Flavum. *Ruiz et Pavon. p.* 284. Pancratium.
3. Rubrum. *Sp. inedita. Specimen in Herb. Lambert.* Pancratium *Pavon.*

Bulb round. *Leaves* narrow. *Scape* before the leaves? *Umbell* many-flowered, pedunculated. *Germ* continued straight from the peduncle, ovate; 3-furrowed. *Tube* slenderest in the middle, ventricose in the upper part. *Petals* short, reflex; perhaps in some only half expanded. *Cup* dentate, connecting the filaments. *Filaments* nearly erect, the alternate longer. *Anthers* short, incumbent. *Stigma* obtuse, apparently simple. *Capsule* widely ovate, 3-furrowed, opening by valves. *Seeds* black, oblong-ovate, but curved. *Inhabit* S. America. *Species.* 1. Coccineum.—2. Flavum.—3. Rubrum. I am not aware of these plants having ever been brought to Europe, but I suspect that I have a bulb of the genus. P. Aurantiacum, *Kunth,* probably belongs to this genus.

CLINANTHUS.

Folia angusta, ensiformia, basi tubulosâ scapum amplexâ. *Umbella* 2-pluriflora. *Pedunculi* erecti. *Germen* trisulcum sub-rotundum. *Tubus* declinatus, infundibuliformis. *Laciniæ* breves, à tubo directè (ut videtur) continuatæ. *Patria* America meridionalis. *Species.*

1. Luteus. *Sp. inedita. Specimen à Pavon in herbar. Lambert.*

Leaves narrow, ensiform, with a tubular base embracing the scape. *Umbell* two or more flowered. *Peduncles* erect. *Germ* with three furrows, nearly round. *Tube* sloped from the germ, funnel-shaped. *Petals* very short, apparently continued straight from the tube. *Country* S. America. *Species.* 1. Luteus. Only known by *Pavon's Specimen in Mr. Lambert's herbarium.* Pancratium Luteum.

CARPODETES.

Bulbus oblongus. *Folia* ensiformia. *Scapus* solidus, pedunculatus, pauciflorus. *Spatha* 1-phylla, fissa. *Pedunculi* erecti. *Germen* trisulcatum oblongum, mediâ parte coarctatum, pedunculi continuum. *Tubus* imâ parte tenuis, cylindricus, curvatus, summâ ventricosus. *Laciniæ* patentes. *Corona* dentata staminifera. *Filamenta* alterna æqualia. *Stigma* simplex, dilatatum. *Capsula* germini conformis, crassior. *Semina* nigra, magna. *Patria* America meridionalis. *Species.*

1. Recurvatus. *Ruiz et Pavon.* 285. Pancratium.

Bulb oblong. *Leaves* ensiform. *Scape* solid, pedunculated, few-flowered. *Spathe* of one leaf, split. *Peduncles* erect. *Germ* with three furrows, oblong, contracted in the middle. *Tube* slender, cylindrical, and curved in the lower part, ventricose in the upper. *Petals* patent or reflex. *Cup* dentate, bearing the filaments. *Filaments* alternately equal. *Stigma* simple, thicker than the style. *Capsule* like the germ, but thicker. *Seeds* large, black. *Country* S. America. *Species.* 1. Recurvatus. Only known by the figure and description of Ruiz and Pavon, by which the genus may be sufficiently determined. I have named it Carpodetes, from the constriction of the middle of the germ and capsule.

LEPERIZA.

Bulbus subrotundus, squamosus; squamæ (ut videtur) non ipsæ foliorum bases, sed, veluti bracteæ, petiolum amplexæ. *Folia* petiolata. *Umbella* (in Latifoliâ) circiter 7-flora. *Pedunculus* curvatus. *Germen* trisulcum, ovatum, pedunculo continuatum. *Tubus* brevis, obversè infundibuliformis. *Laciniæ* conniventes. *Corona* dentata, staminifera. *Filamenta* sinuatim conniventia. *Antheræ* breves, incumbentes. *Stigma* dilatatum. *Capsula* pendula, germini conformis. *Semina* parva, obovata. *Patria* Peru. *Species.*

1. Latifolia. *Ruiz et Pavon.* 284. Pancratium.

Bulb roundish, scaly, the scales not forming the base of the leaves, but embracing the petiole, like bractes. *Leaves* petiolated. (*Umbel* about 7-flowered in L. Latifolia). *Peduncle* curved. *Germ* with three furrows, ovate, continued directly from the peduncle. *Tube* short, wider at bottom. *Petals* conniving (but with the points bent back?). *Cup* dentate, bearing the filaments. *Filaments* sinuous, conniving. *Anthers* short, incumbent. *Stigma* thicker than the style. *Capsule* pendulous, like the germ. *Seeds* very small, obovate. *Country* Peru. *Species.* 1. Latifolia. Known only by the figure and description of Ruiz and Pavon. I have named it from λέπη and ῥίζα, on account of its scaly root.

LIRIOPE.

Bulbus subrotundus. *Folia* bifaria, angusta. (*Scapus* circiter 5-florus in L. Ringente). *Germen* sessile vel subsessile, declinatum. *Tubus* germine continuatus, brevis, cylindricus. *Corona* declinata, imâ parte stami-

nifera, summâ filamenta comprehendens labio reflexo eroso. *Laciniæ* reflexæ. *Filamenta* et *stylus* declinata, apice assurgenter curvato; alterna æqualia. *Antheræ* breves incumbentes. *Stigma*, ut videtur, rotundatè obtusum. *Patria* America meridionalis. *Species*.

1. Ringens. *Ruiz et Pavon.* Pancratium.

Bulb roundish. *Leaves* bifarious, narrow. (*Scape* in L. Ringens about 5-flowered). *Germ* sessile or subsessile, sloped so as to be nearly horizontal. *Tube* continued from the germ, short, cylindrical. *Cup* sloped, the lower part bearing the filaments, the upper part including them, with the lip bent back and notched. *Petals* bent back. *Filaments* and *style* sloped, with the points curved upwards. *Anthers* short, incumbent. *Stigma* apparently round and obtuse. *Country* S. America. *Species*. 1. Ringens. Only known by the figure and description of Ruiz and Pavon. I have given it the name of Liriope, the mother of Narcissus, on account of the upper part of the cup including the filaments.

Pancratium Viridiflorum, *Ruiz et Pavon.* 3. 55.—P. Variegatum. *Ib.*—P. Incarnatum. *Kunth* 1. 223.—P. Humile. *Cavan. ic.*—P. Parviflorum. *Redouté*: mihi ignota, generum sunt omnia, ut videtur, diversorum, et novis nominibus designanda.

CALOSTEMMA.

Vide Bot. Mag. 2100, 2101, *et* 2124 *in notâ, et Bot. Reg.* 421 *et* 422.

This genus never having been confounded with Pancratium, is not properly within my limits. I placed Calostemma Purpureum in a pan of water while it was in flower, in consequence of the notice given of its habits in the Bot. Mag. which had very near caused the loss of the bulb, as its fibres rotted immediately. Both Purpureum and Luteum appear to suffer from much water, especially in winter; and, although found in the neighbourhood of water, they do not appear to be swamp plants; and one of them is mentioned by Oxley as growing on a dry hill.

PROIPHYS.

Bulbus ovatus. *Folia* latissima, petiolata. *Scapus* folia vix præcurrens. *Spatha* trifida. *Umbella* multiflora. *Pedunculi* recti. *Germen* ovale, tubo et pedunculo continuatum, dissepimentis imperfectis vix triloculare, loculis dispermis, rarius trispermis. *Tubus* cylindricus, angulis obsoletis. *Laciniæ* alternæ æquales (in Amboinensi exteræ angustiores). *Filamenta* divaricata, basi dilatatâ, complanatâ, proximis contiguâ, extra tubum inserta, et membranâ tenuissimâ vix discernendâ ibi connexa; alterna (extera scilicet) breviora. *Antheræ* breves, imâ parte filamentis affixæ. *Stylus* erectus, cylindricus. *Stigma* punctum attenuatum, fimbriatum. *Ovula* obovata, apice dehiscente, embryo exserto; unum e duobus in loculis singulis sæpè erectum, alterum pendulum. *Capsula* obovata, acumine brevi, tricostata, dissepimentis marcidis. *Semina* duobus integumentis crassè carnosis, albumine bulbum in capsulâ adhuc immaturâ integumentis dehiscentibus protrudente. *Patria* Amboyna, Sumatra. *Species*.

* 1. Amboinensis. *Bot. Mag.* 1419. Pancratium.

Bulb ovate. *Leaves* very broad, petiolated. *Scape* rising a little before the leaves. *Spathe* trifid. *Umbel* many-flowered. *Peduncles* straight.

Germ oval, continued from the peduncle and tube, scarcely three-celled (the dissepiments being imperfect) with two ovules in a cell, rarely three. *Tube* cylindrical, with obsolete angles. *Petals* alternately equal (in P. Amboinense the outer narrowest). *Filaments* diverging, with the base greatly dilated and flattened, touching each other and adhering to the petals just without the tube, and near that point united by a fine and almost imperceptible membrane, the outer shortest. *Anthers* short, joined at the lowest extremity to the filaments. *Style* erect, cylindrical. *Stigma* an attenuated point, fringed. *Ovules* obovate, with the point open, and the embryo protruded; one of the two often erect, and the other pendulous. *Capsule* obovate, with a short point, 3-ribbed, with the dissepiments decayed. *Seeds* with two thick fleshy integuments, the internal albumen protruding a bulb through the aperture of the integuments into the capsule before its maturity. *Country* Amboyna, Sumatra. *Species.* * 1. Amboinensis. *Bot. Mag.* 1419. Pancratium.—*Culture and observations.* This plant flowers readily in the stove after a season of rest; and its time of blossoming may be varied accordingly. It is singular that it should ever have been called a Pancratium, since it has no cup, though the enlargement of the base of the petals, where they touch each other, gives the appearance of a cup. The genus was named Eurycles by Mr. Salisbury in the Hortic. Trans. from the breadth of its leaves, which can scarcely be depended upon as a generic feature; and as he has not defined the genus, and the name does not appear to have been adopted, I have (though generally very unwilling to alter a name unnecessarily) called it Proiphys, on account of the singular circumstance of the premature germination of the seed, and the protrusion of the embryo from the ovule, to which I know nothing similar or analogous. Seeds of Crinum and Hymenocallis will often sprout in the capsule, if suffered to remain in it after it is ripe and dried up, but that is merely as grain will sprout in the ear; and the young bulb is formed at the end of the sprout which issues from the seed and pierces the earth. In Proiphys the bulb itself is protruded from the seed at the point furthest from its attachment in the capsule before it is ripe, at which time, if taken out, the seed and bulb attached to it will perish. The embryo, or young bulb, may be seen projecting from the point of the ovule while the flower is fresh and lately blown, and the germ I believe not fecundated; and the point from which it issues appears to be unconnected with the germ, and consequently not the point by which the ovule is fecundated.

HYMENOCALLIS.

Bulbus subrotundus. *Folia* bi-multifaria. *Scapus* solidus, 2-angularis, floribus effetis curvatim depressus. *Umbella* 2-21-flora. (*Flores* albi, odoratissimi). *Spatha* bifida. *Germen* sessile vel subsessile, trigonum, triloculare, trivalve. *Loculi* 2-6-spermi. *Ovula* oblongo-obovata, in fundo loculi erectè posita, albumine solido à membranâ non separabili; embryon albumini conforme, dimidio minus. *Tubus* cylindricus obsoletè angularis, germine gracilior. *Laciniæ* æquales, patentes, flaccidæ, coronæ aliquando adnatæ. *Corona* infundibuliformis, staminifera. *Filamenta* paria, longa, flaccida. *Antheræ* longæ, hinc quartâ parte, hinc trinis incumbentes, *Pollinis* superficie scabrâ. *Stylus* longus, flaccidus. *Stigma* rotundum, minutissimè fimbriatum, dein viscosum. *Semina* magna, carnosa, integumento viridi non separabili, sæpe capsulam immaturè rumpentia. *Incolunt* plagas occidentales.) *Species.*

* 1. Speciosa. var. longè-petiolata. *Bot. Mag.* 1453.
* —. var. 2. Humilis, petiolo brevi.
* —. var. 3. Angustifolia, foliis semi-recumbentibus petiolo brevi.

* 2. Amœna. *Bot. Mag.* 1467. P. Fragrans. *Redouté.*
* –. var. Ovata. *Bot. Reg.* 43. P. Ovatum.
* 3. Guianensis. *Bot. Reg.* 265.
4. Undulata. *Kunth* 1. 222.
* 5. Expansa. *Bot. Mag.* 1941. Species maxima?
* 6. Pedalis. *Sp.* inedita, floribus pedalibus; tubo 7, limbo 5-unciali, loculis 5-6 spermis; foliis magnis, acutis.
7. Patens. *Redouté.* *Ker Journ. Sc. and Arts.* *Sp.* inter Expansam et Caribæam media.
* 8. Caribæa. *Bot. Mag.* 826.
* 9. Angusta. *Bot. Reg.* 221.
* 10. Tenuiflora. *Sp.* inedita. Angustæ affinis, foliis angustioribus, tubo longiore.
* 11. Litoralis. *Jacquin.* Pancratium Litorale.
* 12. Disticha. *Bot. Mag.* 1879. Dryandri. *Ker Journ. Sc. and Arts.*
* 13. Crassifolia. *Sp.* inedita, foliis magnis, crassis, suberectis, vaginantibus, obtusè acuminatis; laciniis angustis, coronâ parvâ.
* 14. Rotata. *Bot. Mag.* 827. P. Rotatum, pluriflorum.
* 15. Mexicana. *Bot. Mag.* 1082. P. Rotatum, biflorum.

Huic generi referenda videntur,

16. Quitoensis. *Sp.* inedita Peruviana ex Quito in *Herbar. Lamb.—Pavon.* Uniflora, tubo 4½-unciali, coronâ 2-unc. laciniis 3½-unc.
17. Caroliniana. *Catesby Carol.* 3. 5.

Bulb roundish. *Leaves* irregularly bifarious, not absolutely multifarious. *Scape* solid, with two angles, after the flowering bent to ground. (*Flowers* white, very fragrant.) *Umbel* from 2 to 21-flowered. *Spathe* bifid. *Germ* sessile or subsessile, triangular, 3-celled, 3-valved. *Cells* from 2 to 6-seeded. *Ovules* oblong-obovate, standing erect and attached to the bottom of the cells, with solid albumen inseparable from the outer membrane; the embryo within of the same form, and about half as big as the ovule. *Tube* cylindrical, obsoletely angular, slenderer than the germen. *Petals* equal, widely expanded, flaccid (white in all the known species), sometimes adhering to the cup. *Crown* funnel-shaped, bearing the filaments. *Filaments* equal, long, flaccid. *Anthers* long, attached at about a quarter of their length from one extremity. *Pollen* with a rough surface. *Style* long, flaccid. *Stigma* round, minutely fimbriated all over, becoming viscous. *Seeds* large, fleshy, with a green inseparable integument, often bursting the capsule before they are ripe. *Inhabit* the Western Hemisphere. *Species.* * 1. Speciosa. var. with long petioles. *Bot. Mag.* 1453.—* 1. var. 2. Humilis, with broad leaves and a short petiole.—* 1. var. 3. Angustifolia, with narrow leaves almost recumbent, and a short petiole.—* 2. Amœna. *Bot. Mag.* 1467.—* 2. var. 2. Ovata. *Bot. Reg.* 43. P. ovatum.—* 3. Guianensis. *Bot. Reg.* 265.—4. Undulata. *Kunth.* 1. 222.—* 5. Expansa. *Bot. Mag.* 1941. The largest species?—* 6. Pedalis; an unrecorded species, with flowers a foot long, the tube 7, the petals 5 inches long; cells 5-6-seeded; leaves large, sharp-pointed; introduced by Mr. Shepherd of the Liverpool garden.—7. Patens. *Redouté.* *Ker Journ. Sc. and Arts.* Species intermediate between Expansa and Caribæa.—* 8. Caribæa. *Bot. Mag.* 826.—* 9. Angusta. *Bot. Reg.* 221.—* 10. Tenuiflora, an unrecorded species allied to Angusta, with leaves narrower and more recumbent, and the tube longer than the limb, which in Angusta is shorter than the limb.—* 11. Litoralis. *Jacquin.*—* 12. Disticha. *Bot. Mag.* 1879. Dryandri. *Ker Journ. Sc. and Arts.* Leaves broader, rougher, more regularly bifarious than *Litorale*, tube shorter, being of the same length as the limb.—* 13. Crassifolia; an unrecorded species, with great thick leaves, nearly erect, vaginating, obtusely pointed; narrow petals, and small cup.—* 14. Rotata. *Bot. Mag.* 827.—* 15. Mexicana. *Bot. Mag.* 1082; two-flowered. "*To this genus* *probably belong.* 16. Quitoensis. An unrecorded species from Quito in Mr. *Lambert's Herbarium*, with one flower, tube 4½, cup 2 inches long.—17. Caroliniana. *Catesby's Carolina*, 3. 5. Found by him in a bog on the Savanna river, otherwise unknown; and perhaps inaccurately represented. *Culture, &c.* The first 13 species thrive freely in the stove in a moderately strong loam freely watered. The 2d variety of Amœna (P. ovatum. *Bot. Reg.)* does not maintain itself distinct when raised by seed, and the breadth of the leaf is very variable in the species. Guianensis is nearly allied, and both species are liable to suffer from water lodging in the heart of the leaves. Expansa is the largest known species, measuring, when vigorous, four feet from the bulb to the point of the flower buds, which should measure ten inches. Crassifolia has only flowered with me once, about four years ago, and I sent the inflorescence to Mr. S. Edwards, and neglected to make any memorandum concerning it. The plant has some resemblance to Cyrtanthus obliquus, though much larger: the flowers somewhat resembling Caribæa, but, if I recollect right, with a longer tube. The bulb came from Florida. Rotata and Mexicana require a lighter soil, and will thrive in a peaty compost, having abundance of water in summer and very little in winter. The least drop of water lodging between the young leaves is fatal to them, which makes it very difficult to keep them in health. Rotata has the finest flowers of the genus, but with me it is invariably 4-flowered. A mule which I have raised by impregnating it with the pollen of Disticha, produces more flowers and disregards wet amongst the leaves. The existence of Caroliniana rests on the authority of a very bad plate in Catesby. As he has described the spot where it grew, it could probably be ascertained what his plant was. I suspect it was a many-flowered specimen or variety of Rotata. The name Hymenocallis was given by Mr. Salisbury in the Hortic. Transac. to this genus, distinguished by him from Pancratium by 2-seeded cells. I have adhered to his name, but the ground of separation stated by him is erroneous; as the cells are frequently 4-, and sometimes 6-seeded. I distinguish it by the structure and posture of the ovules and seeds, the filaments, the form and attachment of the anthers, the stigma, the occasional bursting of the capsule, and the adhesive roughness of the pollen. When there are four ovules in a cell, two are placed behind the others; when there are six, the additional two in a third row behind them, the hinder rows necessarily attached a little higher, but in the same erect posture. From the form and position of the embryo, the radicle might be expected always to issue at the point by which the seed was attached, but it is sometimes forced into an oblique direction by the growth of the seed, and issues through the side. I apprehend that the sharp-pointed embryo of Hymenocallis and Crinum is able to pierce the solid albumen, and does necessarily issue through the natural passage. Hence it happens that the seeds sometimes vegetate immediately when the embryo has an open vent, and other seeds from the same capsule will lie for a year, and perhaps perish unless relieved where the obstruction is too great. The radicle of Crinum sometimes runs along just under the integument, apparently unable to pierce it. The scape of Hymenocallis becomes bent to the ground by a powerful contraction of one side near the base, that of Crinum simply leans from flaccidity while the seed is ripening; which should have been added to the points enumerated in the Preliminary Treatise, p. 7. H. Speciosa is shortly pedunculated.

ISMENE.

Foliis annuis, semine rotundiore, tubo plùs minùs curvato, coronâ longiore, filamentis brevioribus, superioribus tribus in coronam cernuis, tribus inferioribus conniventibus et implexis, ab Hymenocallide discreta. *Species.*

* 1. Amancaes. *Bot. Mag.* 1224. Pancratium.
2. Calathinum. *Bot. Reg.* 215.
* 3. Nutans. *Bot. Mag.* 1561. P. Narcissiflorum. *Jacquin.*

Distinguished from Hymenocallis by annual leaves, rounder seeds, tube more or less curved, longer cup, shorter filaments, of which the upper three are bent downwards into the cup, and the lowest three conniving and crossing each other. *Species.* * 1. Amancaes.—2. Calathinum.—* 3. Nutans.—*Culture, &c.* The only difference between the cultivation of Ismene and Hymenocallis, is, that the bulbs of Ismene require to be completely dry during the winter, and will certainly perish if watered during the season of rest. Amancaes was separated from Pancratium by Mr. Salisbury (Hort. Trans.), under the name Ismene, without any statement of the points in which it differed. Nutans agrees with Amancaes in the curvature of the tube; Calathinum, which in foliage is closely allied to Amancaes, has the tube much straighter, but a little bent. The seeds of Amancaes, ripened at Mr. Griffin's, burst the capsule, as those of Hymenocallis generally do, but they were rounder and smoother, and, if I recollect right, the scape was erect and not bent to ground, like that of Hymenocallis. The seed of Nutans, represented by Jacquin, agrees in form with that of Amancaes. The cup of Ismene is not prolonged beyond the insertion of the filaments, as in Liriope, except in the intervals.

CHLIDANTHUS.

Scapus præcox. *Umbella* 2-7-flora. Germen erectum pedunculo brevi et tubo continuatum, trigonè ovale, 3-loculare. *Ovula* opacè carnosa, complanata, biseriatim cumulata marginibus vix imbricantibus, 22 vel plura in loculis singulis angulo interiori annexa. *Tubus* cylindricus angulis obsoletis. *Laciniæ* subæquales, semipatentes. *Filamenta* erecta, laciniarum basi extra tubum inserta, alterna (interiora scilicet) longiora. *Antheræ* erectæ, imâ parte filamentis affixæ. *Stigma* obtusum; vix lobatum? *Incolunt* Americam meridionalem. *Species.*

*1. Fragrans, floribus flavis, odoratissimis; tubo 3-4-unciali, limbo 1 et ¼ unciali; foliis linearibus, erectis, glaucis.

Scape rising before or with the leaves. *Umbel* 2-7-flowered. *Germ* erect, continued straight by the tube and a short peduncle, triangularly oval, 3-celled. *Ovules* opaquely fleshy, flattened, heaped in two rows with edges scarcely lapping, 22 or more in each cell annexed to the inner corner. *Tube* cylindrical with obsolete angles. *Petals* half-spread, nearly equal. *Filaments* erect, inserted just without the tube, those attached to the inner petals longest. *Anthers* erect, attached at bottom. *Stigma* obtuse; scarcely lobed? *Inhabit* S. America. *Species.* *1. Fragrans; with from 2 to 7 yellow flowers, very fragrant; tube from 3 to 4 inches long, limb about 1 and a ¼; leaves linear, erect, glaucous. *Observ.* Bulbs of this beautiful plant have been received by Lord Carnarvon from Buenos Ayres, and by Mr. Brookes of Ball's Pond from Chili. In both collections they flowered very soon after their arrival. The flowers which I inspected had lost their fragrance, which is said to resemble that of the Jonquil.

EUCROSIA.

*1. Bicolor. *Bot. Reg.* 207. Not having seen its flower, I shall only add, that the leaves are glossy, broader, and less erect than represented, and the bulbs require rest in the autumn and winter.

POSTSCRIPT.

THE genus Strumaria would properly fall within the limits of this Treatise; but I have only flowered Strumaria filifolia;* and as the genus is said to have some very singular variability in the style and filaments, I can only refer the reader to the Bot. Reg. 440. The species enumerated are, 1. Spiralis. *Bot. Mag.* 1383.—2. Rubella. *Jacq. ic. rar.* 358.—3. Stellaris. *Jacq. hort. Sch.* 71.—4. Crispa. *Bot. Mag.* 1363.—5. Gemmata. *Bot. Mag.* 1620.—6. Undulata. *Jacq. ic. rar.* 360.—7. Linguæfolia. *Ib.* 356.—8. Truncata. *Ib.* 357.—9. Angustifolia. *Ib.* 359.—10. Filifolia. *Bot. Reg.* 440. The style in this genus is said to be variable, and subject to singular protuberances near the base, and the filaments to be "sometimes entirely distinct, at other times variously monadelphous, at others partly monadelphous and partly gynandrous; three alternate ones adhering to each other, the rest to the style." This is not very satisfactory, and it will perhaps be found necessary to detach some of the species from this genus. It should be carefully ascertained whether there is any difference in the anthers, germ, ovules, and seed, coinciding with the variation of the style, which would make a separation clearly expedient; whether the difference of style and filaments goes together; and on the other hand, whether any such variations take place in a less degree amongst individuals of the same species. The enlarged base of the style, the divarication of the filaments, and the non-undulated petals separate Strumaria filifolia from Nerine.

Two species of Crinum, supposed to be unrecorded, have been sent to Lord Carnarvon from New Holland, one said to be from the interior, of which a bulb, now in my collection, does not appear at present distinguishable from young plants of C. Americanum, but I am told that the stronger bulbs have acquired a different appearance and more glaucous leaf; the other said to have been collected by the surveying vessel in Water Island, on the N. W. coast, having a round bulb and leaves resembling those of C. Erubescens, but much narrower. Bulbs have also been sent from Sumatra, by Sir Stamford Raffles, of a species of Crinum apparently a variety of C. Sinicum, from which its leaves are scarcely distinguishable, but a little thinner. It appears, by the same channel, that C. Amabile produces seed in Sumatra, though it has proved barren here. On examination of a flower from a scape just produced by Lord Carnarvon's bulb of Crinum Augustum, the most material distinction between it and C. Amabile appears to be that the style, which in the latter is near an inch longer than the filaments, in Augustum is about as much shorter than the filaments. The peduncle of Augustum is shorter, and the petals broader, having their inner surface stained with the red colour, which is only seen through in those of Amabile. The germ which I dissected had no distinguishable ovules. The flowers were not quite so long as those of Amabile when in perfection, but the flowers of that plant are sometimes smaller at this season than at a more favourable period of the year. I have already mentioned that the leaves of Augustum are obtuse, of Amabile acute. The affinity is so great between C. Amabile and Augustum, between Toxicarium and Brevifolium, between Defixum and Ensifolium, between Pedunculatum, Canaliculatum, and Exaltatum, and in leaf and bulb at least, for I have not seen their inflorescence, between Lorifolium and Longiflorum, that if I had not found them already named and distinguished, I should have been inclined to consider the secondary plants as permanent varieties. The Berbice variety of C. Erubescens has flowered at Mr. Lee's with white petals and dark anthers. It was found on the banks of the Corantyne river. It should be mentioned, that in some instances, when the seed of Crinum has been rather deficient in sap, I have found it possible to detach small portions of the integument from the albumen; but not from seeds of Hymenocallis, which have the integument thinner. In both, when the young plant is near a year old, the albumen becomes entirely exhausted, and the integument remains hollow and empty. A mule from Erubescens by Scabrum has been just added to the hybrid sorts of Crinum. Mr. Lee has an Hymenocallis which he calls Spiralis, with reflex petals spirally twisted, but I suspect that it is a singular accidental variety of H. Amœna.

Since the foregoing pages were printed, I have dissected a seed of Coburgia Reticulata, but it was imperfect, having no germ. Its form was roundish, but with three obsolete angles, and a little pointed where attached to the capsule. The outer integument was black and thin, like that of Hippeastrum, but not extended to a greater breadth than the inner coat, which was thick and empty. If the seed had been perfect, I apprehend that the thick inner coat would have been a solid mass of albumen, enclosing the embryo. The seed of Hippeastrum has an outer black integument, extended to a greater breadth than the inner, and consequently projecting with an empty foliaceous margin; an inner integument equally separable, but thinner than the outer, and nearly fitting the albumen, which is flat, obovate, and pointed at bottom, the radicle of the embryo being approached to the point of the inner, but not to the margin of the outer integument.

On close examination of the seed of Zephyranthes Tubispatha, I find the aperture in the outer integument to be much less apparent than in Z. Atamasco.

The species of Hippeastrum, mentioned above as 5. Equestre var. glabrifolia, having since flowered, I have ascertained that it is quite distinct from Equestre. It should stand in the enumeration * 6. Stylosum. Its bulb is flattened, like that of Equestre; its leaves formed like those of Equestre, but more glossy and very purple near the base. Its scape taller than that of Reginæ. Its tube in form and posture like that of Reginæ, being less slender and pendulous than Equestre. The beard, as that of Reginæ, in greenish white tufts. Its petals smaller than those of Reginæ, but not widely expanded and curved back like Equestre. Its filaments $\frac{4}{5}$ths of an inch longer than the coroll, standing out before the expansion of the flower. The style, which in Equestre is more than an inch shorter than the flower, in this is an inch and a quarter longer than the limb. The stigma with very short round lobes. The star very short and green, not spread into broad rays like that of Equestre, or prolonged into white stripes, as in Reginæ. It should have been mentioned that seedlings of Hippeastrum, till they arrive at the age of puberty, do not seem to require a season of rest. Hippeastum Pulverulentum and Stylosum will be figured in the 49th vol. of the Bot. Mag.

On examination of a fine umbel of Ammocharis Falcata, I find its ovules and pollen exactly accord with those of Coranica. On reference to the definitions of Ammocharis and Boophane, I find, however, that I have inadvertently admitted an error at the time I made the separation of the two sections. The filaments of Boophane are spreading, and the style straight; of Ammocharis, declined and curved upwards. I observe that a singular bending takes place in the peduncle or germ of Ammocharis, sometimes laterally, sometimes upwards, but generally downwards, which disappears again when the flower is nearly withered. The stigma of Ammocharis is more fimbriated when perfect than appears in the engraving which was made from a cut specimen of Coranica, and it is irregularly obtuse, sometimes appearing bifid. The description of the germ as sometimes turbinate was taken from specimens in which the seed was setting. In the young state the germ of Falcata and Coranica is triangularly oblong-oval, furnishing another feature of affinity to Crinum. I have observed in species of all the subdivisions of Crinum, that the alternate anthers are not attached exactly in the middle. In Amm. Coranica I observed a similar variation, but I cannot assert that it is a decided feature. The fine umbel, with 31 flowers of Ammocharis Falcata, now before me, was obtained by the following treatment. The pot stood dry last winter in the greenhouse. In the spring it was well watered, and the earth from that time kept in a moist state. The summer being very cold, in July its leaves, which had grown to a considerable length, appeared to be making no further progress. It was then placed, together with several of the smaller species of Crinum, in a small hotbed-frame, of which the light was kept constantly a little open to let the steam escape. At the beginning of September it was removed into the stove, and the next day its bud appeared. I suspect that the species of Crinum which do not flower readily, should be kept cooler and dryer in the winter, and their growth promoted by moist heat in summer.

Nerine Pulchella, a species with glaucous leaves, and very pale purplish striated flowers, though placed amongst the Distortæ, furnishes in fact a link between the two divisions, for its style and filaments are curved, but its petals and germ very little distorted. It is fertile, and I have every reason to believe that it is a natural species.

In the division of the foregoing genera it will be observed, that I consider the structure, attachment, and posture of the ovules, and the structure of the germ and of the seed, to be the most important female features, the structure of the style and stigma not being overlooked, though subject to variation: the insertion of the filaments into the corolla which bears them and is in fact a part of the male portion of the flower, and the attachment of the anthers to the filaments, to be not less important than the form of the corolla: the inclination of the style and anthers, the expansion of the petals, and the posture of the germ, to be features of considerable, but of inferior importance: the habits and localities of the plants to be valuable additions, when found to coincide with the more decisive features of separation. It is strange, that in the most ample former descriptions of the several species herein detailed, the ovules, the seeds, the insertion of the filaments, and the attachment of the anthers, have been scarcely noticed.

I cannot pretend to class Amaryllis Minima, *Humboldt et Bonpland.* Nervosa, *Ib.* Tubiflora, *L'Héritier Sert. Angl.* Maculata, *Ib.* Chilensis, *Ruiz et Pavon.* Bicolor, *Ib.* which are S. American species, concerning which our information is very imperfect, but certainly not agreeing with the Linnæan Amaryllis.

October 1821. W. H.

CORRIGENDA.

P. 7. *After fig.* 11. *strike out the three lines beginning,* The germ being, &c. *and insert in their place,* The scape not having two angles, and after the flowering not becoming bent by contraction, but leaning from flaccidity.

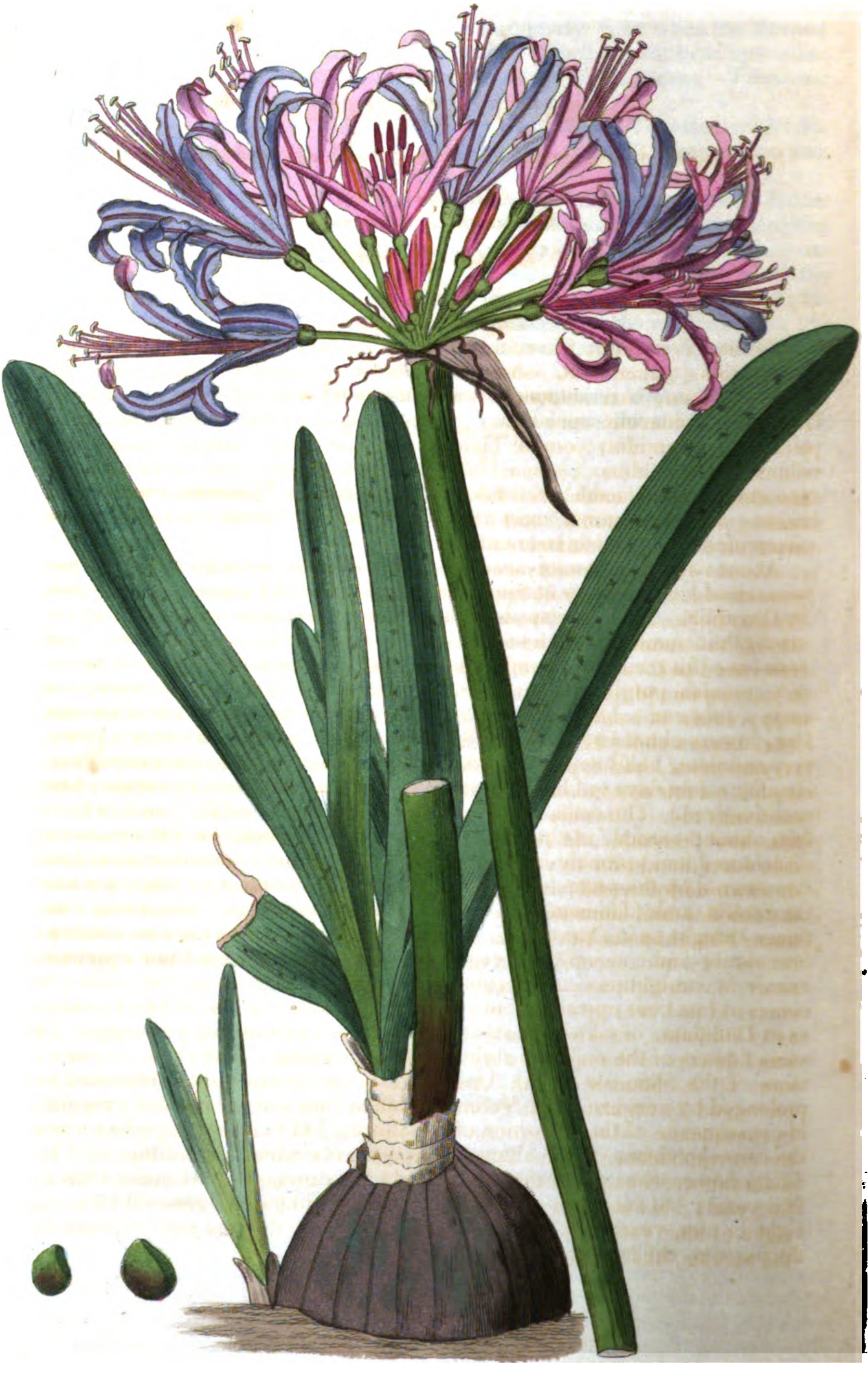
Ammocharis. p. 17. *For Germen* trigonè turbinatum vel obovatum pedunculo directè continuatum *read Germen* trigonè oblongo-ovale, pedunculo sæpe floribus expansis flexo directè continuatum. *For Filamenta* patentia secundum floris posituram recta aut vix curvata *read Filamenta* unà cum *Stylo* declinata apice sursum curvato. *Strike out Stylus* eàdem ratione rectus, aut vix curvus. *In the English, read Germ* triangularly oblong-oval, continued from the peduncle, which is often irregularly bent when the flowers are expanded. *Filaments* and *Style* declined, with the point bent upwards.

Boophane. *p*. 18. *insert Filamenta* patentia; *stylus* rectus. *Filaments* spreading; *style* straight.

Crinum. *p*. 21. *For Umbella* 1-60-flora *read Scapus* 1-60-florus. *P*. 23. *in the English*, *Scape* from 1- to 60-flowered. *For* C. Erubescens var. Berbicensis *read* C. Erubescens var. Corantyna.

Hippeastrum. *p*. 31. *For* testâ externâ nigrâ *read* testâ externâ latiore nigrâ, membranâ internâ albumini magis conformi et acutè obovatâ, albumine complanato, embryi radiculâ membranæ internæ basi, sed non umbilico exteriori, approximatâ. *In the English*, *for* the outer shell black *read* the outer shell wider, black; the inner membrane acutely obovate and more conformable to the albumen, which is flat, the radicle of the embryo being approached to the base of the inner membrane, but not to the aperture in the outer shell.

P. 31. *for* * 5. var.? Glabrifolia *read* * 6. Stylosum; *and p*. 32. *for* * var. smooth-leaved *read* * 6. Long-styled. *In both pages for* 6, 7, &c. *read* 7, 8, &c.



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Nerine Hybrida.

J. Watts sc.

NERINE VERSICOLOR,

Curvifoliâ-undulata hybrida. Changeable-coloured mule Nerine.

Class and Order.
Hexandria Monogynia.

Generic Character.
See page 18.

Hybrid Character.

Nerine Versicolor, Curvifoliâ-undulata hybrida, bulbo viridi-purpurascente; foliis $\frac{3}{4}$ unciæ latis, sub-glaucis, obtusè acuminatis; scapo viridi, 18-unciali, $\frac{3}{16}$ lato, basi aliquando purpurascente; umbellâ circiter 16-florâ, bracteatâ; pedunculis uncialibus; germine loculis circiter 6-spermis, ovulis plerumque emarcidis; corollæ laciniis semipatentibus undulatissimis apice reflexo, $1\frac{1}{4}$ uncialibus, $\frac{1}{4}$ unciæ latis, roseo-rubentibus, dein cæruleo-purpurascentibus costâ mediâ vel striâ rubente; stylo et filamentis roseo-rubris inferne purpurascentibus, stylo filamentis longiore, corollâ breviore, denuò assurgenter curvato; stigmate albo.

About four and twenty seedling bulbs of this beautiful Mule Nerine were raised six years ago at Spofforth, from Nerine Undulata, impregnated by Curvifolia. No difference has been observed amongst the seedlings, excepting that some have the leaves a little more glaucous than others, and some have the scape green and others a little purpurascent. The bulbs are of a greenish purple, the leaves rather glaucous, $\frac{3}{4}$ of an inch wide; the scape a foot and a half high, $\frac{3}{16}$ of an inch wide; peduncles about an inch long, flowers about 16; the laciniæ of the corolla $\frac{1}{4}$ of an inch wide, $1\frac{1}{4}$ long, very undulate, half-expanded with the tips bent back, rose-coloured, changing after a few days to blueish purple, except the middle rib or stripe, which continues red. The cells, which in Undulata are 2-seeded, and in Curvifolia about 8-seeded, in the mule are generally 6-seeded, but the ovules are discoloured and probably imperfect. In Undulata the germen is always bent downwards by the premature growth of the seeds in the upper cell, by which the corolla and filaments become distorted; in the mule the germen continues straight as in Curvifolia. In Undulata the filaments are very liable to irregularity and generally curved downwards, those of the mule approach nearer in straightness and regularity to those of Curvifolia: the style becomes at last bent upwards, but not so much bent, nor is it at first so short, as in Undulata, of which the style is by degrees considerably prolonged. In some flowers of the mule the style is entirely wanting. The style, or one or more of the filaments of the Amaryllideæ, are occasionally abbreviated or prolonged by accident. In Nerine Undulata they are particularly irregular, in consequence of the distortion of the flower, but in its most perfect state the correspondence of the alternate filaments is evident. Seedlings of Undulata flower when about three years old; the strongest of the mules blew at four years; but seedlings of Curvifolia seem not likely to flower till they are eight or nine years old. The figure represents a full-sized seed of each of the parents, the largest being that of Curvifolia.

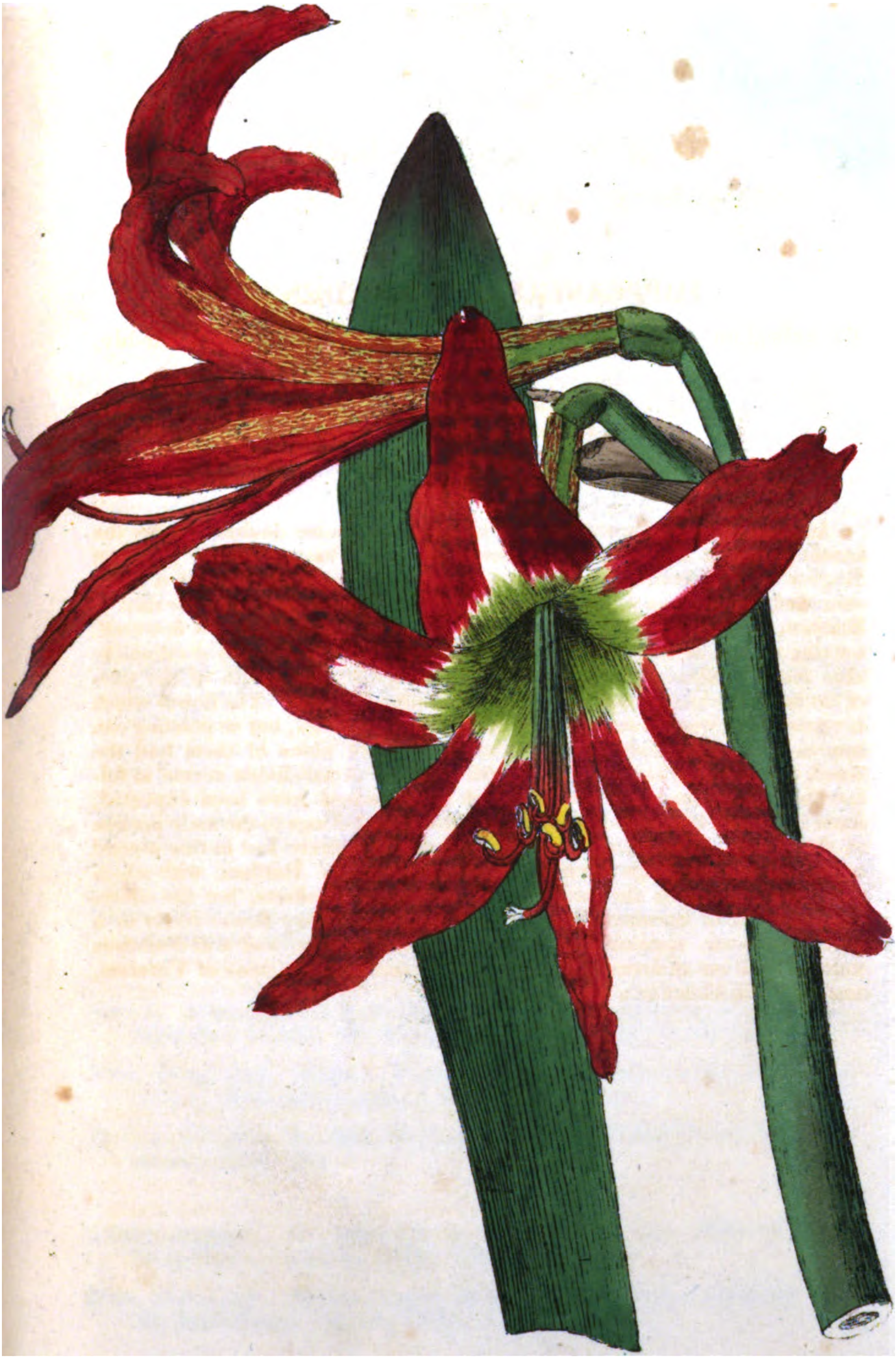
HIPPEASTRUM SPLENDENS,

Bis hybridum, Rutilo-Equestri-vittatum.—Splendid Knight's-star-lily, twice muled.

Class and Order.
Hexandria Monogynia.

Generic Character.
See page 31.

In consequence of a confusion of labels I have some doubts whether the female parent of these mules was produced from Vittatum by the pollen of Reginæ or of Equestre. Its flower was of a very bright scarlet with a white star, and having been deprived of its anthers and impregnated by the dust of Rutilum, it produced 50 or 60 seedlings, most of which have now flowered, varying a little in shape and colour, and some of them scarcely distinguishable from Rutilum, except by a little vestige in the mouth of the tube of the beard, which is derived from the two other species. The flower which is represented was amongst the brightest of the seedlings, but no painting can approach the splendour of the natural hue. One alone of them had the coroll considerably larger. The coroll of Mule Amaryllideæ seems to follow the size of the male parent, which might indeed have been expected, since the coroll bears the filaments, and therefore belongs to the male portion of the flower. The strong scent of Vittatum is entirely lost in this second cross, all the seedlings having proved scentless, like Rutilum, with which they also conform in the production of an infinity of offsets, but the offsets are not blind or dormant, like those of Rutilum. They flower freely in a cool greenhouse, appearing to be as hardy as Vittatum, and will doubtless succeed well out of doors. The leaves are narrower than those of Vittatum, and they will bloom in a much smaller pot.



W. Herbert del. & lithogr.

Hippeastrum bis Hybridum.

APPENDIX TO THE CATALOGUES OF BOOKS

IN THE

FOREGOING SIX VOLUMES;

OR,

List of Books quoted in the Seventh Volume which have not been enumerated in the Lists given in the other Volumes.

Act. petropol. Acta Academiæ Scientiarum Imperialis Petropolitanæ pro annis 1777—1782. Petropoli, 1778—1782. 4to.

An. de cienc. nat. Anales de ciencias naturales. Madrid, 1799, seqq. 8vo.

Barton med. bot. Vegetable Materia Medica of the United States, or Medical Botany. By Will. P. C. Barton. Philadelphia, 1817. 4to. 2 voll.

Bellardi app. fl. pedem. Lud. Bellardi appendix ad floram Pedemontanam. Aug. Taurin. 1792. 4to.

Braune fl. salisburg. Salzburgische Flora von Franz Anton von Braune. Salzburg, 1797. 2 voll. 8vo.

Clayt. n. Numeri plantarum, quibus D. Clayton specimina (ad Gronovium) transmisit. Vide *Flor. Virg.*

Falk it. Johann Peter Falk Beyträge zur Topographiscen Kentniss des Russichen Reichs. St. Petersburg, 1785—1786. 3 vol. 4to.

Ferd. Bauer digit. illustr. Digitalium Monographia: tabulis Ferdinandi Bauer. Curâ John Lindley. London, 1821. fol.

Ferr. de cult. flor. Jo. Bapt. Ferrarii Senensis De Culturâ Florum Libri IV. Romæ, 1633. 4to.

Herbert append. An Appendix by the Hon. and Rev. Will. Herbert. With Plates. London, 1821. 8vo.

Horn. hort. hafn. Hortus Regius Botanicus Hafniensis. Conscripsit J. W. Hornemann. Hafniæ, 1815. 8vo.

Hornem. hort. hafn. suppl. J. W. Hornemann. Horti Regii Botanici Hafniensis Supplementum. Hafniæ, 1819. 12mo.

Host synops. Nicol. Thomas Host. Synopsis Plantarum in Austria crescentium. Vindobonæ, 1797. 8vo.

Jacq. enum. pl. agr. vind. Nicol. Jos. Jacquin. Enumeratio stirpium quæ sponte crescunt in agro Vindobonensi. Vindobonæ, 1761. 8vo.

Lehmann monog. prim. Monographia generis Primularum. Scripsit J. G. C. Lehmann. Lipsiæ, 1817. 4to.

Lichtenstein reise in sudl. afr. Reisen in Sudlichen Africa in den Jahren 1803, 4, 5, und 6. Von Hinrich Lichtenstein. Berlin, 1811, 1812. 2 vol. 8vo.

Lindley collect. bot. Collectanea Botanica by John Lindley. London, 1821. fol. fasc. 6, seqq.

Link abbild. auserl. gew. bot. gart. zu berl. Abbildungen auserlesener gewächse des konigliches botanisches gartens zu Berlin. Beschreibungen und anleitung sie zu zeichen von H. F. Link und F. Otto. Berlin, 1820; Erstes Heft, seqq. 4to.

Link enum. hort. berol. Enumeratio Plantarum Horti Regii Botanici Berolinensis altera. Autore H. F. Link. Pars 1. Berolini, 1821. 8vo.

Mauritius Catalogue. A Catalogue of the exotic plants cultivated in the Mauritius at the Botanic Garden. Mauritius, 1816. 4to.

Nees von esenb. hor. phys. berol. G. G. Nees von Esenbeck. Horæ Physicæ Berolinenses collectæ ex symbolis virorum doctorum Link, Rudolphi, &c. Bonnæ, 1820. fol.

Nov. act. petropol. Nova acta Academiæ Scientiarum Imperialis Petropolitanæ. Petropoli, 1787, seqq. 4to.

Osbeck it. (ed. angl.) A voyage to China and the East Indies by Osbeck; together with a voyage to Suratte by Olof Torren, and an account of the chinese husbandry by C. G. Eckeberg. Translated from the German by John Reinhold Forster. London, 1791. 2 voll. 8vo.

Rœmer et Schultes syst. veg. Caroli à Linné Systema Vegetabilium. Editio Nova. Speciebus indè ab editione XV. detectis aucta et locupletata; curantibus Joan. Jac. Rœmer et Jos. Aug. Schultes. Stuttgardiæ, 1817. vol. 1. seqq. (à vol. 5. à Schultes solo).

Schrank fl. Salisb. Francisci de Paula Schrank Primitiæ Floræ Salisburgensis. Francofurti ad Mænum, 1792. 1 vol. 8vo.

Schrank pl. rar. hort. monac. Francisci de Paula Schrank Plantæ rariores Horti Monacensis. Munich, 1817—1819. fol.

Schmidt flor. bohem. Francisci Wilibaldi Schmidt Flora Boëmica. Cent. 1—4. Pragæ, 1793—1794. vol. 1, seqq. fol.

Sprengel umbel. spec. Kurt. Sprengel. Species Umbelliferarum minùs cognitarum illustratæ. Halæ, 1810. 4to.

Tabern. kreuterb. Neuwvollkommentlick Kreuterbuch durch Jacob. Theod. Tabernæmontanum. Franckfurt am Mayn, 1625. 3 vol. fol.

Trans. soc. for the enc. of arts and manuf. Transactions of the Society instituted at London for the Encouragement of Arts, Manufactures, and Commerce. London, 1783—1819. XXXVI volumes; seqq. 8vo.

Ventenat choix. Choix de plantes, dont la plupart sont cultivées dans le jardin de J. M. Cels; par E. P. Ventenat. Paris, 1803. fol.

Weinm. phytanth. Joh. Wilh. Weinmann Phytanthozaiconographia. 4 Bände. Regensburgh, 1737—1742. fol.

Wendl. sert. hannov. Sertum Hannoveranum, auctore J. C. Wendland. Fascic. 1—4. Hannoveræ, 1798—1801. fol.

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